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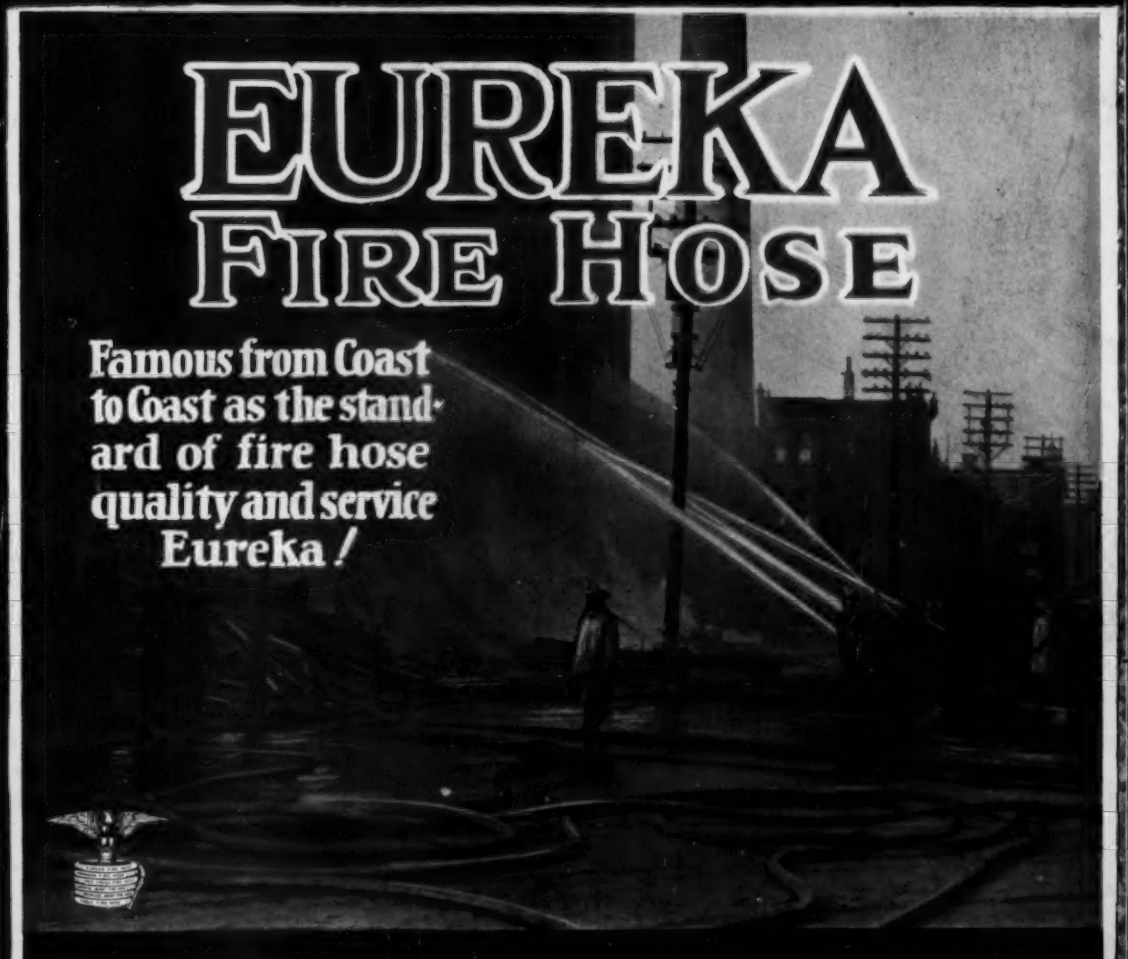

Eureka Fire Hose Manufacturing Company
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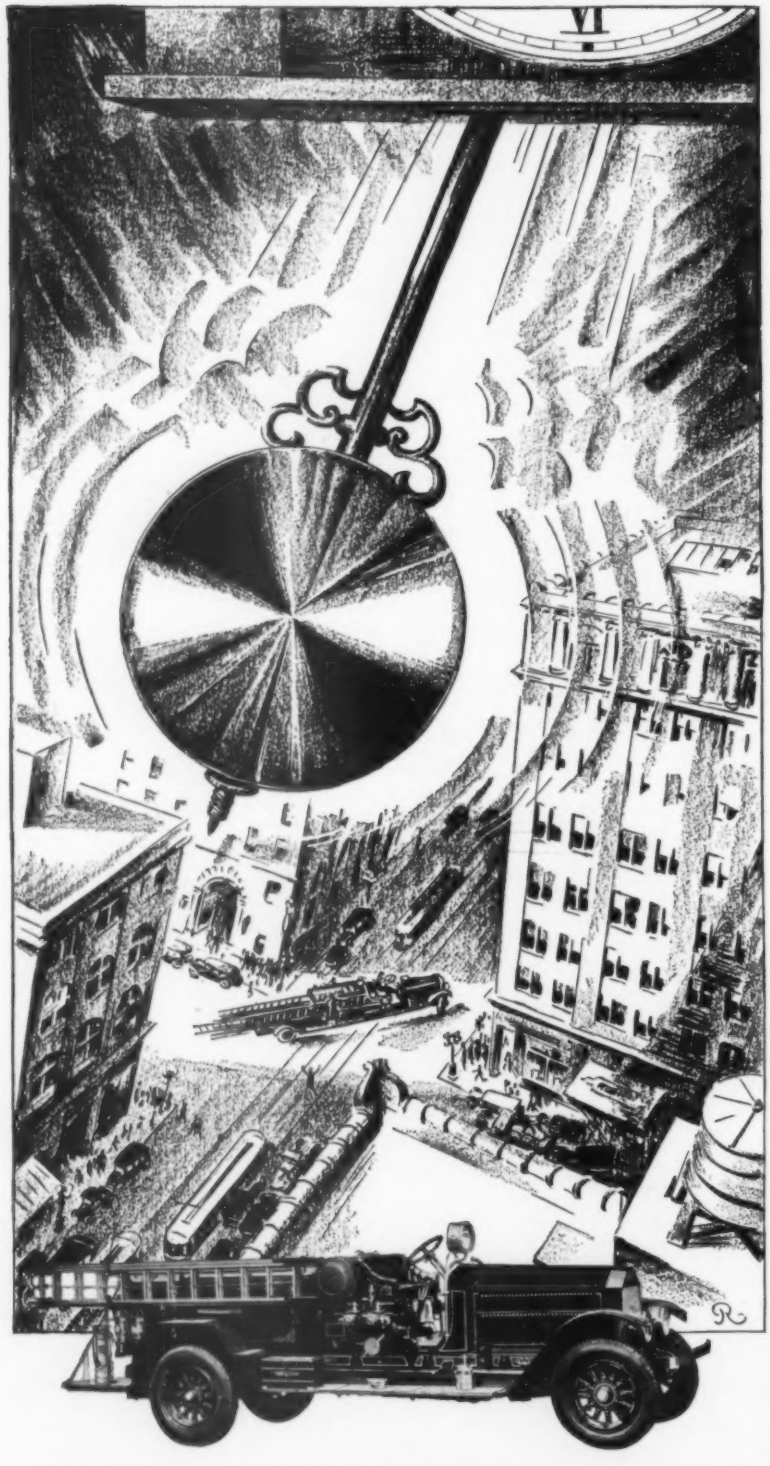

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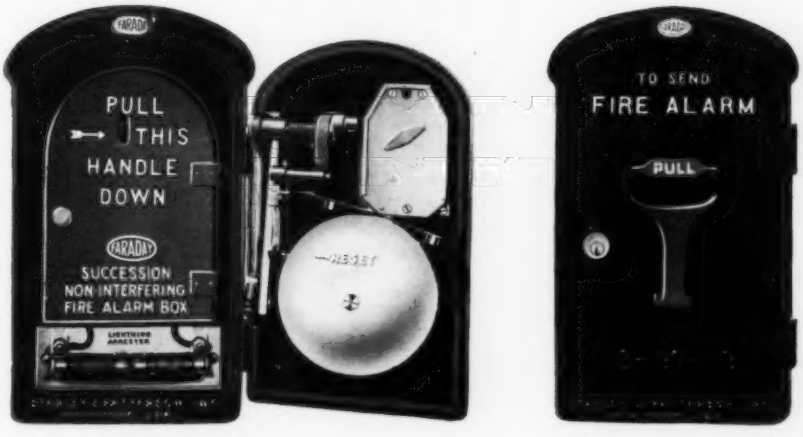
A Complete Engineering Service for Extinguishing Fires



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A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

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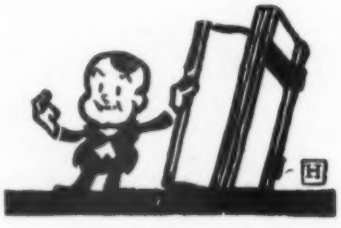

"The Most Interesting Part?" Right!

THE story is told of Rudyard Kipling writing a friend on this side to send him some American magazines. When they arrived, Mr. Kipling found the advertisements had been torn out, presumably to save postage. He immediately wrote his friend he had omitted the most interesting part.

¶ The writer telling this story goes on to say: "When I read literary magazines, I want the advertisements of books, world cruises, palmy scenes of Algeria and Egypt along with it. When I read a manufacturers' magazine, I want the steel structures, concrete bridges and transmission machinery; a financial magazine, the financial advertisements. In a word, when my morning paper ceases to carry advertisements it loses its tang."

¶ Yes, Sir! And the reader of FIRE ENGINEERING wants to keep posted on all the latest in apparatus, equipment and fire protection and fire prevention products offered by manufacturers.

¶ This is the real Market Place of the field. Let's use it to the full!

The Publishers

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Pneumatic Ladder Hoist

is Easily Operated and is Rugged and Dependable

The Ahrens-Fox device for raising, lowering, and controlling the aerial ladder is one of the outstanding features that have made Ahrens-Fox Ladder Trucks so favorably known among Fire Officials everywhere.

This Pneumatic Ladder Hoist in its present advanced form has a much reduced over-all height with lower center of gravity. The turntable is of exceptionally rugged construction. All surfaces are accurately machined and the turntable revolves on steel ball bearings.

These are just a few of the many points of merit in the design and construction of the Ahrens-Fox ladder hoist, but there isn't room here to give you more than a slight idea of its advantages, and the superiority of Ahrens-Fox Ladder Trucks.

However, if you will send us your name, position, and address we shall be glad to send you Bulletins with complete information on this improved aerial ladder control, on ladder trucks, and on Ahrens-Fox apparatus in general.

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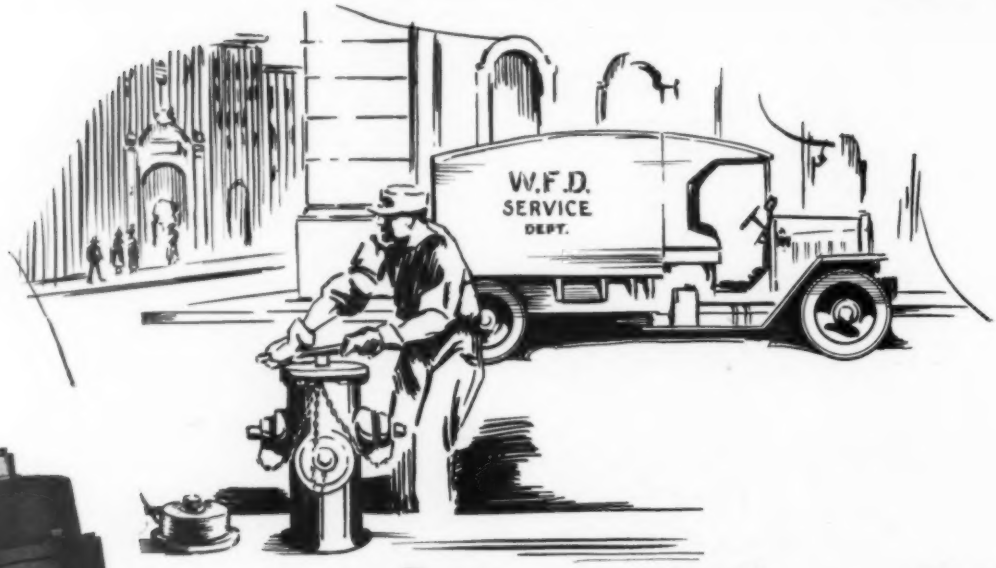

A One Man Job

COMPLETE take-down, inspection and assembly of fire hydrants is a one man job — when you are equipped with Darlings. An advantage that permits overhaul of the entire system at *one half* the usual time.

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Any parts showing wear can easily be replaced and the entire hydrant be assembled in short order.

Other exclusive Darling features are fully explained in a catalogue that is of interest to every municipal engineer.

Write for it.

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FIRE HYDRANTS

Many fire chiefs have given their unqualified endorsement of "SHUREDRY" for salvage work. Chief Cody, of the Atlanta Fire Department, thinks enough of "SHUREDRY" to write us the letter reproduced below. Such a statement from an actual user is many times more valuable as a guide for your selection of salvage covers than anything we could say.

"Shuredry"

WATERPROOFED

Salvage Covers

Read Chief Cody's Letter

G. B. CARLTON, SECRETARY — W. B. CODY, CHIEF

CITY OF ATLANTA

DEPARTMENT OF FIRE

May 24, 1928

Fulton Bag & Cotton Mills,
City.

Gentlemen:

We have been using your No. 201 "Shuredry" salvage covers in the Fire Department for a period of twenty years, or more, and have received wonderful service from them. It is my opinion that your covers are superior to any on the market.

It is with pleasure that I recommend your product to anyone desiring service and satisfaction.

Very truly yours,

W B Cody

Chief Fire Department

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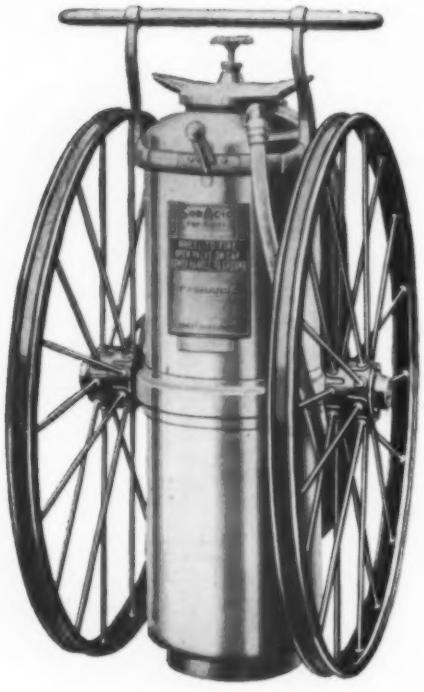
ATLANTA NEW ORLEANS BROOKLYN ST. LOUIS DALLAS MINNEAPOLIS

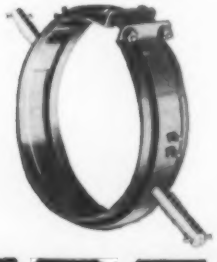


Are You Getting These Advantages?

In addition to wheels, French & Hecht manufacture spindle bands and top bands for chemical fire engines.

Leading makes of chemical fire engines are now equipped with these standardized French & Hecht parts.

French & Hecht assembly of steel wheels and bands is approved by the Underwriters Laboratory.



CHEMICAL fire engines equipped with French & Hecht steel-spoke wheels and spindle bands offer these advantages:

French & Hecht wheels are designed especially for this use by an organization that specializes in design and construction of steel wheels.

Because of their special construction, particularly the fastening of spokes to hub and tire, French & Hecht steel wheels are stronger and lighter than other types of wheels.

They are mechanically correct and accurately made.

These wheels are made in large quantities in the most efficient factory in America specializing in steel wheels. So efficient are French & Hecht manufacturing facilities that a distinct saving in cost of wheels can be effected in most instances for manufacturers of wheeled equipment. Any information concerning wheels will be gladly supplied. Write.

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Wheel Builders Since 1888

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STEEL WHEELS

HOW A. D. T. SERVES FIRE FIGHTING ORGANIZATIONS

from B. C. Blighton, Chief, Watchmen Division, American Car and Foundry Motors Co.

"Regarding the fire alarm which was sent in over your lines on Oct. 18th, wish to advise that we are very well satisfied with your prompt action in notifying the City Fire Department.

It would have taken considerably longer to have reached a City Fire Department alarm box and while the actual damage was very small, the quick action obtained through your lines is highly satisfactory."

"—prompt action in notifying fire department—"

THIS communication from American Car and Foundry Motors Co. of Detroit, Mich., is just another instance of the manner in which A.D.T. Central Station Service operates to reduce fire losses. Due to the prompt transmission of alarms to your fire fighting organization, you are able to reach the scene much more quickly and thereby reduce the possible fire loss.

The efficiency of your own fire fighting organization may be increased with the help of A.D.T. protection services. They are operated through 113 A.D.T. central offices throughout the country.

CONTROLLED COMPANIES OF

AMERICAN DISTRICT TELEGRAPH CO.

183 Varick St., New York, N. Y.

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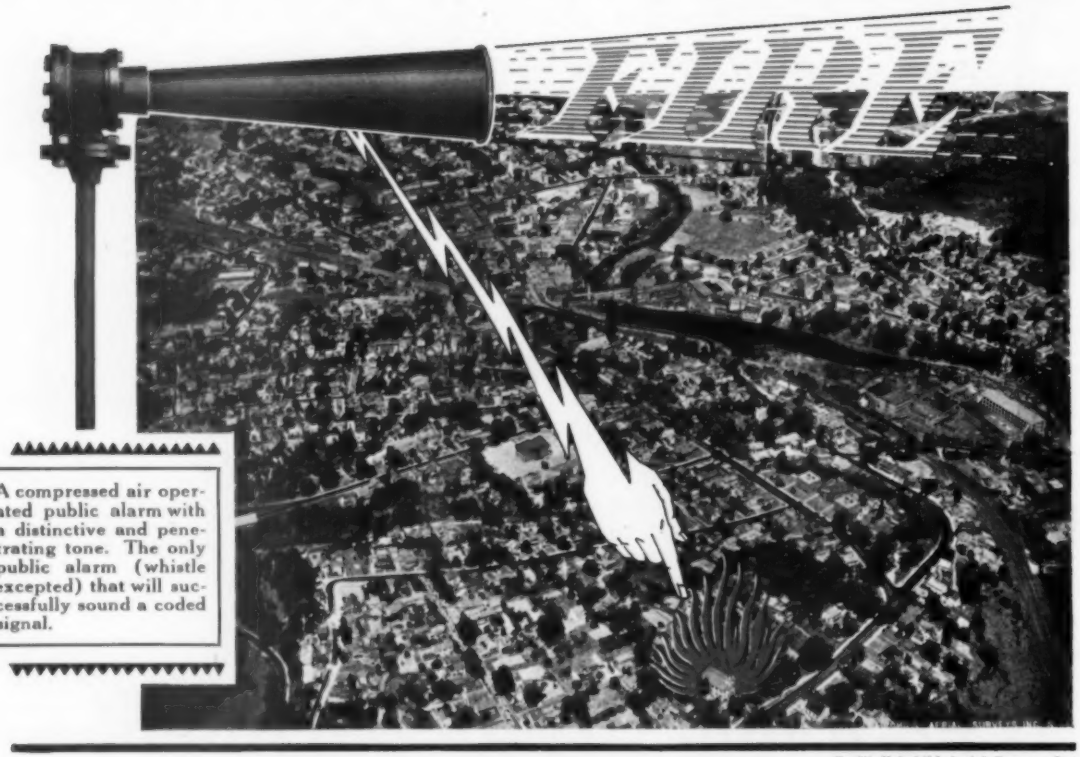
THE DIAPHONE



A compressed air operated public alarm with a distinctive and penetrating tone. The only public alarm (whistle excepted) that will successfully sound a coded signal.

Credit Fairchild Aerial Surveys, Inc.

WHEN you have tried all other public alarm devices and find your need for a penetrating public alarm with a distinctive tone, unfilled, it is time that you installed a **Diaphone.**

The **Diaphone** is the old standby in public alarms. For years it has protected small municipalities throughout the country. It protected the U. S. Army Cantonments during the war and it can still be found protecting U. S. Goverment property. The **Diaphone** also has a fine service record in an entirely different field, one where the life and property hazard is equally as great as in the fire protection field—the lighthouse service. Along the coasts of this country, on the banks of the St. Lawrence River and on the shores of the Great Lakes, the **Diaphone** as a foghorn, has for years warned ships off the rocks. It was selected by two Governments for this important service because of its penetrating tone and reliability of operation.

The **Diaphone** has a tone that cries "Fire". It cannot be confused with whistles and other noises of the modern community. It is the only public alarm (other than a whistle) that will satisfactorily sound a code signal from a standard street fire alarm box. Furthermore, a storage reservoir with a capacity of 100 blasts, is provided so that an alarm may be sounded on the **Diaphone** even though the electric current should be shut off for a period of 24 hours.

Before you install a public alarm investigate the **Diaphone.**

A Bulletin describing the Diaphone more completely will be sent upon request.

Will operate from

standard street fire alarm box

THE GAMEWELL COMPANY

Newton Upper Falls, Mass.

"A Box A Block"

Can be operated from

Peerless P.N.I. Transmitter located at fire station or phone exchange

FIRE ENGINEERING

(A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER)

The Journal of the Fire Protection Profession

VOLUME LXXXI | JULY 25, 1928 | NUMBER 15

Questions Asked at Test for Deputy Chief

Sixty Out of Eighty-Three New York Battalion Chiefs Enter Examination—Complete Papers as Presented to Candidates

By WILLIAM JEROME DALY

COMPETITIVE examinations for promotion to the ranks of Deputy Chief of Department and Chief of Battalion recently have been held by the Civil Service Commission of the City of New York. The results will not be made known for at least six months.

The examination for promotion to Deputy Chief was held on June 28 and 29, with sixty out of eighty-three battalion chiefs entering the competition. The examination for promotion to Battalion Chief was held on July 10 and 11, with 198 captains competing out of a total of 305 in the service. Both examinations were held on days during which the temperature and the humidity made conditions most uncomfortable for the competing fire officers.

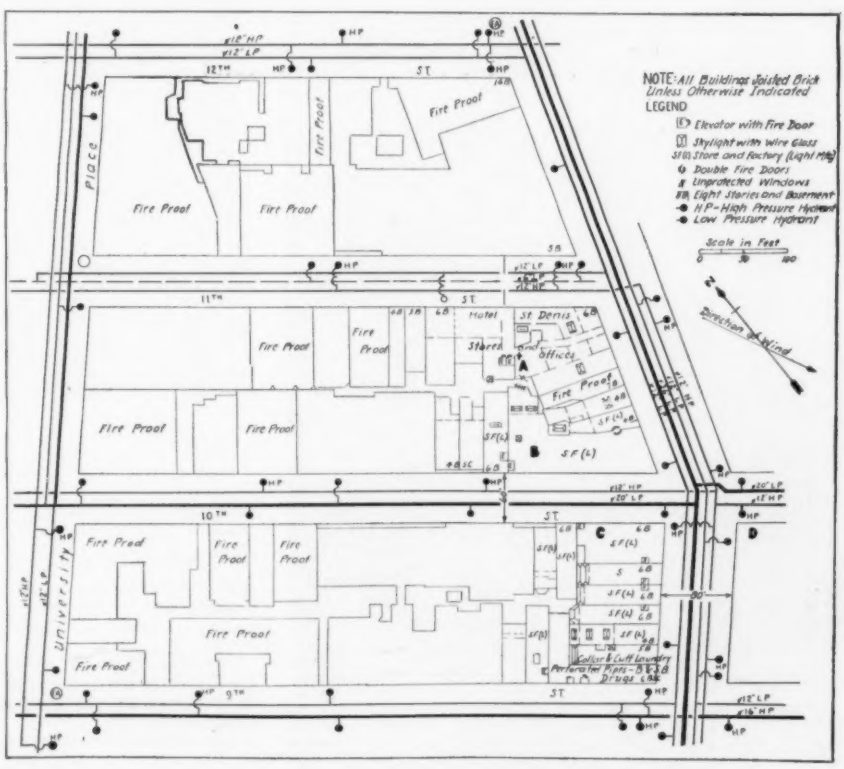
The existing eligible list for Deputy Chief of Department expires October 15 next at midnight. There is only one eligible remaining on the list and at this writing there are no vacancies. The list originally had seventeen names on it.

The existing eligible list for Battalion Chief expires at midnight on October 8 next. This list originally had 146 names on it and 68 have been disposed of by promotion thus far. There are no vacancies at the moment.

Battalion Chief Raymond George of the 12th Battalion in Harlem led the current list for Battalion Chief and he has entered the competition for Deputy Chief of Department. Capt. John J. McCarthy of H. & L. Co. 43 in Harlem and assigned to the Division of Public Assembly Headquarters, led the current list for captain and has entered the competition for promotion to Battalion Chief.

Herewith FIRE ENGINEERING is publishing the series of questions asked by the Civil Service Commission in the examination for Deputy Chief. In the next issue will be published those for Battalion Chief. There is general satisfaction among the competitors with the questions as to fairness and practicability, although in the examination for Deputy Chief, it was felt by some of the candidates that at least two questions, i.e., the tank wagon subject and the question on the legal aspects of the negligence action resulting from an accident might better have been reserved for some Assistant Corporation Counsel test or some Legislative test.

There are now three promotion tests for Fire Department positions in the hands of the examiners of the Civil Service Commission. Last January a competitive



examination was held for the position of Fire Captain. To date the result of that examination has not been issued by the commission and the department is now twenty captains short. The result of this test is expected next month and vacancies will be filled immediately.

The examination for Deputy Chief in full is as follows:

Date: June 28, 1928.

Administration, Weight 6, Part I—To be Finished by 1:00 P. M.

Note: All Administration questions are based on the assumption that you are, for the time being, Deputy Chief with all the authority and responsibilities accorded to you under the title and by the Regulations of the Department.

Question 1, 2, 3 and 4. The accompanying sketch shows the character of buildings in the vicinity of 11th Street and Broadway, Manhattan. They are of ordinary type of structures of 40 or 50 years ago, many of them remodeled for modern office requirements and occupied largely by wholesale clothing establishments. They have the customary equipment required by the Codes and are in good condition.

Building A was originally the Hotel St. Denis extending around the corner from Broadway; B is in process of demolition and at the present time has its roof stripped, all piping and electric wiring, fixtures, windows, etc., removed; C has Woolworth stores with unprotected windows on its upper floors where there is some storage; D is Wanamaker's department stores.

At 4:30 p. m. on a cold windy day in early December, box 525 is pulled. When you reach the scene the fire is under charge of a Junior officer who had just pulled a 2nd alarm. The fire had originated on the third floor of building A near a point marked X.

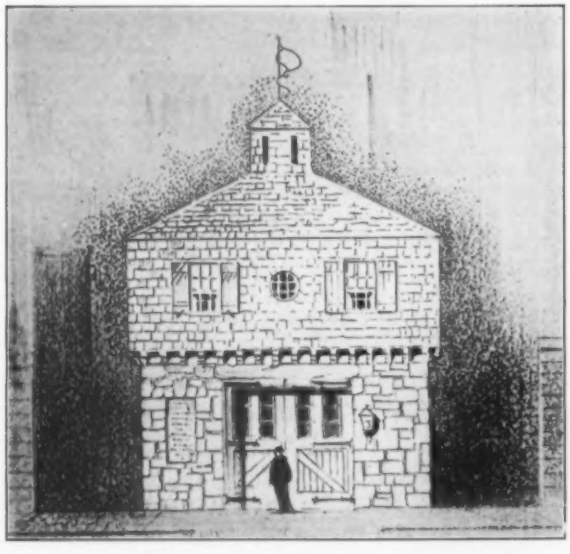
On your arrival you find that the fire has worked upward through the open unprotected windows to the 5th and 6th floors. A few of the steel shutters of building M had been closed by the occupants but the heat was too intense for the employees there to venture near.

Sparks and flying material are being carried south-east toward, and into, building B, where considerable debris is gathered.

Considering the present hazards and possibilities you order a 3rd alarm at 4:50; water pressure ordered increased to 150 pounds.

At 5:00 the high pressure system breaks down.

State in the order of procedure what you have done between 4:33 and 5:00 to cover exposures; point out what contingencies you may expect to arise and what precautions and what action you took.



This Is the Latest in Fire Station Architecture

Chicago is planning to erect a fire station a few feet from the site of the original Fort Dearborn, the first structure in what is now the prospering city. In order to commemorate local history it is planned to design the building to serve as a model of the famous fort. One thing is certain. The building will be novel and unlike fire station construction.

Assignment Card, Box 525, Broadway and E. 12th St.

						Res	H&L	DC	CoB	WT	Res	CoB
72	14	5	33			1	3	20	2 6 3	2		7
18	25	28	20	13			5				FW2 1	
16	24	1	55	3			12		5			
17	30	19	31	11	26		9		2			
7	9	27	21	65	12		7					

Relocations

H&L

23-14 21- 3
74- 1 32-55 2- 3 4-12 22- 4
15-17 76-19 8-11 91-8
44-65 10-12 2- 7

State clearly what you must do after the break down occurs to confine the fire, till under control.

Questions 5 and 6. Assuming that, in the absence of the Chief of the Department from the city, you happen to be Deputy in charge when you encounter the following conditions:

You are directing a 4th alarm warehouse fire near Canal Street and Varick Street and you are informed of a 4th alarm fire at 41st Street and Broadway and, almost simultaneously with it, a 5th alarm near North 8th Street, Williamsburg.

(a) Assuming reasonable conditions which might govern you in reaching a decision, state what action you would take to protect the uncovered part of the city, and your own movements.

(b) How many companies would it be necessary to relocate?

(c) Enumerate your reserve.

Question 7. A factory building with brick walls and mill construction floors, six stories high and about 75x150 in size, is being demolished. Building was originally equipped with sprinklers, but these are being removed in the course of the razing; large holes have been cut in the side walls to permit of removal of machinery; protection between floors has been removed, or weakened, for the same reason; flooring is oil soaked; buildings of similar type surround this one though not in process of any change.

State whether or not you consider this building requires any special fire protection attention and, if so, outline what recommendations you would make.

Date: June 28, 1928.

Administration, Part II—To be Finished by 5:15 P. M.

Question 8. State, approximately, the estimated value of fire losses in the City of New York for the year 1926 or 1927 as indicated by the late reports of the Department.

In what types of occupancy, or structures, did the most serious fires occur? Or name some of the most disastrous fires and their features.

Where the automatic sprinklers seemed to have failed in the extinguishment, what were the main reasons for the failure?

Question 9. Separate fires in various kinds of materials, or occupancies, into the following three groups according to the best method of extinguishment: those that may be handled by cooling or quenching; those by smothering or blanketing; those by special extinguishers.

State the proper materials, agents or means to be used for each group.

Question 10. What is the nature of the fire hazards that prevail most commonly in the First, Second and Third Divisions of Manhattan; and what in the Thirteenth and Fourteenth Divisions of Queens?

Question 11. As to the use of foam streams operating on oil or similar fires, what types of nozzles, sizes and pressures are best used?

Should foam equipment be carried on fire boats?

What type of land apparatus should be so equipped?

Can foam be used to advantage on the surface of salt water?

Can foam be used to advantage in the cargo holds of ships?

Give reasons for answers.

Question 12. For a model building centrally located with about 15,000 square feet ground area for offices, show rooms and small sample stocks, what would you specify for fire resistive construction—fire preventive means—fire protective measures?

Consider the vital points as to outside and inside hazards, representing the results of your experience and observation in fighting fires in such cases.

Note: Do not go into detail on the ordinary Code requirements.

Question 13. (a) Give a clear description of the latest equipment or apparatus which the Fire Department has placed in service in Manhattan giving their points of superiority over the present types.

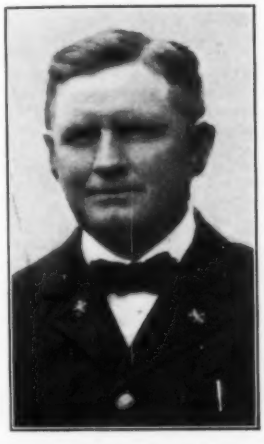
(b) Describe the new rescue outfit recently installed in the

(*Continued on page* 640)

Southeastern Chiefs Hold First Convention

Atlanta, Ga., Scene of Initial Gathering of This Division of the International Association—Good Attendance and Much Enthusiasm

PLENTY of enthusiasm and a large attendance signalized the first annual convention of the Southeastern Fire Chief's Association, a Division of the International Association of Fire Chiefs, held at Atlanta, Ga., on July 5 to 7. There were over 200



Left—Chief J. T. McNulty, President, the Southeastern Fire Chiefs' Association, St. Petersburg, Fla. Right—Chief F. E. Donnald, First Vice-President, Greenville, S. C.

Left—Chief D. B. Copland, Second Vice-President, Southeastern Fire Chiefs' Association, Columbus, Ga. Right—Chief H. E. Whitener, Secretary, Hickory, N. C.

active and associate members present. The headquarters of the Secretary, Chief H. E. Whitener, Hickory, N. C. was established at the Hotel Ansley, where a majority of the chiefs attending registered, while the meetings were held and the exhibits of manufacturers were staged in the Auditorium of the Atlanta Armory.

There was a good representation from the ten states covered by the association, with the exception of West Virginia, none being present from that state.

President McNulty Opens Convention

The first session of the convention was opened by President J. T. McNulty, of St. Petersburg, Fla., at 10 a. m. on July 5. The address of welcome from Mayor I. N. Ragsdale, of Atlanta, was a cordial one, and this was responded to by Chief John M. Evans, New Orleans, La., First Vice-President of the International Association of Fire Chiefs.

Following Chief Evans's address, President McNulty spoke to the Association, telling of what had been done and the plans for the future.

Reports of Officers

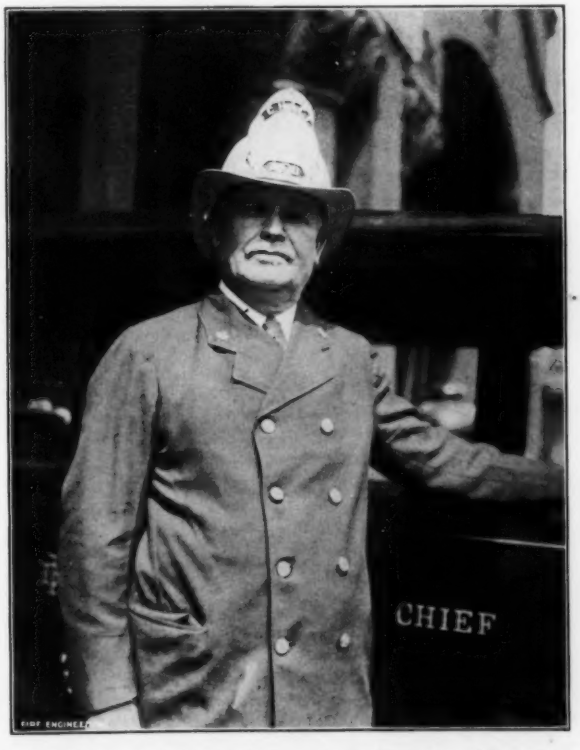
At the afternoon session, at 2 o'clock, the reports of the Secretary, Chief H. E. Whitener, Hickory, N. C., and of the Treasurer, Chief Donald White, Florence, Ala., were made, showing the association to be in good condition, both financially and as to membership.

The session closed with the consideration of the topic, "General Fire Fighting," by the members.

Theatre Party and Smoker in Evening

During the afternoon demonstrations of fire appliances were held, and in the evening the ladies of the convention were tendered a theatre party. At the same time, commencing about 7 p. m., a smoker was held for the men, at which it was intended to hold a Round Table Discussion. However, as it turned out, this proved to

(Continued on page 646)



Chief William B. Cody, Host to the Convention, Who Celebrated His Fiftieth Anniversary as Head of the Atlanta, Ga., Fire Department During the Convention

Ex.-Fire Commissioner Drennan Dead

Thomas J. Drennan, fire commissioner of New York City for a number of years, died suddenly on July 15 of heart attack while at home with his family in Brooklyn. He was fifty-one years old.

The Late Thomas J. Drennan

Mr. Drennan was Democratic party leader of the Fourth Assembly District in Brooklyn. When Mayor Walker was in office, he continued as fire commissioner for the first four months of his administration and then resigned. John J. Dorman was named as his successor. Mr. Drennan was then chosen Commission of Jurors, and at the time of his death, three years of the term still remained to be served.

He was a resident of Brooklyn and educated in the public schools there. He was employed by M. Hemengway and Son, a silk firm in New York City for many years and finally rose to credit manager. He also developed the insurance business of Drennan & McArdle.

Just before Mr. Drennan was made fire commissioner, he was deputy county clerk of Kings County.

He is survived by three brothers.

Rev. Edward P. Costello, chaplain of the fire department, conducted the solemn requirem mass at the Church of the Transfiguration, Brooklyn, at 10.30 a. m., July 18. The Rev. Laurence H. Bracken, chaplain of the police department was deacon and Rev. Patrick A. O'Connor, a fire department chaplain, was subdeacon. The fire department band and an escort of 180 policemen accompanied the body to the Calvary Cemetery.

Among those named as honorary pallbearers are Governor Smith, John H. McCooey, Joseph V. McKee, Justices Edward Riegelmann and Edward Lazansky, William F. Kenny, Edward J. Kinney, William H. Todd, Borough President Henry Bruckner of the Bronx, Justice Arthur Somers, George W. Olvany, former Mayor John F. Hylan and Nicholas F. Brady.

Woonsocket, R. I., to Buy Apparatus—Woonsocket, R. I., has appropriated $13,000 for the purchase of fire apparatus.

Fire Alarm Control Center Opened in Forest Hills, N. Y.

Fire alarm headquarters for the Borough of Queens has been opened in Forest Hills, L. I., N. Y. The complete system will ultimately have five hundred circuits. The system and the building were designed by the fire department employees. From left to right, the photographs show Tim Mahoney, Van Fendrick and Fire Commissioner John J. Dorman.

Haverhill to Entertain Firemen

The forty-ninth annual convention of the Massachusetts State Firemen's Association will be held in Haverhill, Mass., on September 18-20. Committees from the association and one appointed by Chief William H. Hawkins of Haverhill are now engaged in arranging a program of entertainment. The directors are planning interesting papers to be presented at the convention.

The convention headquarters will be at the Hotel Nichols, next door to the Central Fire Station.

At the present time, the association has a membership of 8,400. James S. Koen of Salem is president and Daniel J. Looney of Boston is secretary. The organization is now caring for forty children whose fathers died from natural causes. The association has received many requests for assistance.

Falling Telephone Warns of Hotel Fire

Fire was discovered in the valet room of the Hotel Claridge, New York City, by the watchfullness of a telephone operator and the falling of a telephone instrument.

A flash on the switchboard indicated some one in the valet's room at a time when the room was supposed to be empty. A house detective was notified. He discovered the fire and turned in an alarm.

It was later learned that fire burnt a shelf in that room and that when it became weakened, the shelf gave way and the telephone on it fell to the floor. Two dozen suits in the room were damaged, and some of the rooms on the lower floor were affected by water seeping through the ceiling.

Baird Now in Command at Santa Barbara

Thomas Baird, formerly chief of the fire department in Fresno, Cal., has been appointed superintendent of the Santa Barbara Fire Department. Captain C. F. Freeman also of the Fresno fire department will become drill master and deputy chief in Santa Barbara.

Chief Thomas Baird
Santa Barbara, Cal.

Chief Baird retired in Fresno on a pension. He has rounded out an interesting period of service in Fresno and leaves behind a record to be envied.

Capt. Freeman entered the service in October 1917 and became a lieutenant in 1919. In April of that year he was promoted to the rank ot captain.

Chief Baird assisted in the passage of a $150,000 bond issue in Santa Barbara which is to be used in developing fire department. He spoke at sixteen meetings, stressing the value of an efficient department from the standpoints of safety, economy and other factors. He said that there is a job of reorganizing the fire department in Santa Barbara that promises to be an interesting task.

Passing of the bond issue was one of the conditions that Chief Baird stipulated before he would consider the new appointment. Baird has won the Ince cup three times and has established a reputation as a fire-fighter and fire department officer.

W. Burlington, Ia., to Buy Truck—Some time soon, West Burlington, Ia., plans to purchase a combination chemical and hose truck.

Shultz, Head of Bennington, Vt., Department—Dexter Shultz has been elected chief of the fire department in Bennington, Vt. He takes the place of Chief William E. Sears who was head of the department for twelve years.

Oil Tank Fire Handled With Water

Streams Cool Off Tanks—Finally Extinguished—Comments on Operations

THE fire described in this article of the series on administration differs materially from those previously included in this department in that it involves the use of only one piece of apparatus—a combination chemical and hose truck.

The town in which this fire occurred is located in the far west section of the country. The department consists of but two companies, and with very limited manual strength.

Description of Property Involved

The property directly involved included four tanks of an oil works located beyond the outskirts of the city. As shown in the illustration the other units in the neighborhood of the four tanks involved consisted of a cooler, two engine rooms, work shop, and a bank of five boilers. All of this property was within the plant yard; the office was located outside of the yard.

The Fire

The fire started in one of the four tanks of the group (each having a capacity of 9,000 barrels of oil). The fire started in tank No. 1 shown in the illustration and was apparently caused by an employee who was drilling a hole through the head of the tank with a half inch drill. Either a spark was produced by the electric drill or else sufficient heat was generated by the drill to ignite gasoline which seaped from the tank, which exploded.

Following the explosion, tank No. 2 took fire and at the time of the arrival of the department was burning around the gauge, and gasoline which had spread over the outside was also afire. It should be noted at this point that all of the tanks were covered with duck canvas. After tank No. 2 took fire, fire spread to tank No. 3 and when the department arrived fire was burning around the gauges at the top of the tanks as well as all over the duck on the outside of them.

Tank No. 1 which took fire first was half filled with gasoline and as soon as the gasoline ignited, it continued to pour out through the hole which the tapper had made, sending forth a burning stream. Tank Nos. 2, 3 and 4 were completely filled with gasoline.

How the Fire Was Handled

The fire was burning about one hour when the plant brigade found it was getting beyond control. They immediately called up the city fire department, which sent out a combination chemical and hose truck and a crew of men.

Immediately upon arriving at the fire, hose was attached to a hydrant within the plant, (shown in the diagram) but due to the very poor pressure found at the hydrant (20 pounds) this source of supply was abandoned.

The officer in charge of the company ordered lines stretched to the engine room where a fire pump was located. The engineer was ordered to start the pumps in operation, and thereupon a pressure of 175 pounds was made available.

A single line was stretched to the oil tanks and a 1⅛ inch tip was used. About 350 feet of hose were employed in the line.

The fire department quickly wetted down all three tanks and although the fire continued to reignite from time to time, the men were able with the one stream to prevent the fire from gaining in proportions.

Tank No. 4 was continually wetted so that it did not take fire.

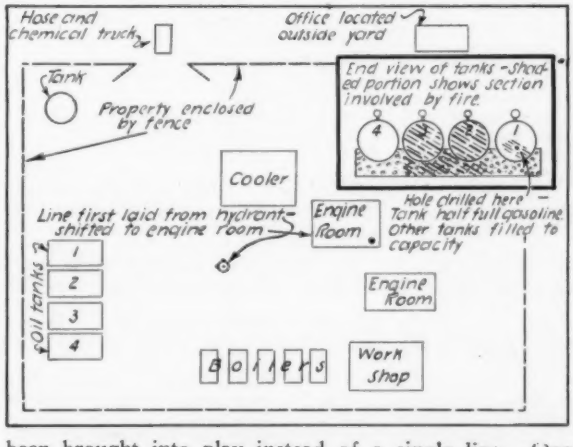
After the tanks has been fully cooled off, fire around the gauges was knocked off with the stream. It was not until the duck canvas around the tank was thoroughly saturated and the excessive gasoline therein consumed that the streams were directed toward extinguishing the gasoline at the gauges.

It took the fire department approximately one and one-half hours to bring the fire under control.

No foam apparatus was available for use by the fire department upon its arrival. Such apparatus—five 40 gallon foam tanks—were on hand, but they had been discharged and no further ingredients were available for recharging and putting them again into use.

Suggested Method of Handling Fire

The fire as handled seems to have been handled properly. A little time may have been saved if two lines had



been brought into play instead of a single line. One hundred and seventy-five pounds pressure on the pumps would make it possible to employ more than one good stream if the pumps had sufficient capacity.

In fires of this type it is essential to first cool off the exposed tank, which apparently the fire department did. Then the other tanks were cooled so as to prevent the formation of gas within the tanks and consequently dangerous pressures. Upon chilling the tanks the gas leaking out around the gauges at the top was checked, making the task of extinguishing the fire a simple one.

Had the fire department failed to chill the tanks off, they would have found gas continuing to leak under high pressure from the top of the tank and with a possibility of some of the tanks rupturing due to the high pressure created by heating the gasoline within. As noted above, the fire department operated properly—covering the exposed tanks, chilling the tanks off, and then extinguishing the fire. It is possible, however, that a little time would have been saved had additional streams been put into use. Outside of this one suggestion, it may be said that the fire was properly handled by the one company responding. Incidentally, the loss was only

$3,500 in this fire, which had burned a total of two and one-half hours.

Questions at Test for Deputy Chief

(*Continued from page 636*)

Brooklyn Fire House, No. 210. In what respects does it differ from the old type?

Question 14. Having suitable appropriation for a new fire boat, what should it be—steam, gasoline or Diesel driven?

State the main points of excellency of each type for use in our waters and give reasons for your selection.

Date: June 29, 1928.

Laws and Ordinances, Weight 1—To be Finished by 12:30 P. M.

Question 1. A modern ten-story loft building with approximately 6,000 square feet of floor space on each floor is soon to be completed. It is to be used for light manufacturing and the occupancy is to be as follows: first floor, restaurant; second to fourth floors, a trade journal publishing house with a job printing department; fifth and sixth floors, a metal stamping establishment; seventh and eighth floors, a leather goods manufacturer; ninth floor, a manufacturer of imitation jewelry, and on the tenth floor, a fountain pen manufacturer.

Describe the legal requirements regarding structural details and fire appliances for this building.

Question 2. The Fire Commissioner has promulgated written specifications for tank trucks to be used in the transportation of volatile inflammable oils through the street of the City.

(a) Discuss the possible fire hazards resulting from the transportation of such oils in tank wagons through the streets and point out where the Fire Commissioner derives his authority to promulgate such specifications.

(b) What are the provisions contained in these specifications regarding proper tank construction?

(c) What are the provisions required for the proper protection against fire of these tank trucks?

(d) Assuming that you were assigned to conduct a test of a tank truck in order to determine its fitness for use in the city streets, outline your method of procedure in conducting such a test.

Question 3. Assumption of facts—A legal action for damages caused by the alleged negligence of the defendant is commenced by the Booth Oil Co. against the City of New York as the result of a collision between a H. and L. apparatus and a vehicle of the Oil Company. Both vehicles are damaged to the extent of about $3,000. In answering the following give your reasons for your answer.

(a) Under what general circumstances would the fireman who operated the apparatus be considered as having been negligent?

(b) Suppose the fireman could be shown not to have been negligent what effect would that have upon the outcome of the action?

(c) Suppose that both the fireman and the operator of the private vehicle were negligent what then would be the outcome of the action?

(d) Are all the firemen on the apparatus who saw the collision competent to testify as witnesses in the case?

(e) Is a police officer who saw the collision, as an employee of the City of New York, competent to testify as a witness in the case?

Question 4. (a) A tenant-owner in a cooperative apartment house desires to place a coal-burning cooking range (in place of a gas range) in his kitchen and a fireplace in his dining room. The rooms are adjacent and the partition between them runs toward and up to the flue for the furnace in the basement.

What alterations must the tenant make to meet the requirements of the code?

(b) What are the conditions and restrictions imposed by law on the transportation, storage, and use of dynamite on construction work in New York City? (c) What is the authority of the Fire Department with regard to the inspection of a United States Government building which lacks adequate fire protective equipment?

Date: June 29, 1928.

Rules and Regulations, Weight 1—To be Finished by 5:00 P. M.

Question 1. (a) Indicate briefly what circumstances or evidence should be present before an officer of the Fire Department in the exercise of good judgment and discretion should prefer charges against a subordinate, for each of the following offences:

(1) Intoxication resulting in unfitness for duty.
(2) Reckless driving resulting in injury to apparatus.
(3) Insubordination or disobedience of orders.
(4) Neglect of duty.
(5) Conduct prejudicial to the good order and discipline of the department.
(6) Absence without leave from company quarters.

(b) Under what circumstances, if any, may each of the above offences be satisfactorily dealt with by the ranking officer without the necessity of preferring formal charges?

Question 2. "The Stephenson Medal is awarded to Captain John Doe, Engine Company XX for maintaining the best disciplined and most highly efficient company in the department during the past year."

If you were assigned by the Chief of the Department to determine to whom this award should be made during the current year, state, (a) the manner in which you would make this determination, and (b) describe the records which are kept that you would consult.

Question 3. (a) Chapter 12 of the Code of Ordinances provides that night watchmen shall be employed in buildings occupied as hotels, hospitals or asylums. Draw up a set of regulations, from a Fire Department standpoint, suitable for night watchmen to be used as a guide in the performance of their duties.

(b) In making your April and October inspections of quarters, apparatus, tools, etc., of the companies in your Division, outline clearly your method of procedure, the items you would pay most attention to, and where you would expect to find the most frequent violations together with your reasons for all of the above.

Question 4. Describe fully the responsibilities of the Deputy Chiefs of the Fire Department and the duties that devolve upon them to bring about the proper co-ordination of the Bureau of Fire Prevention and the uniformed force of the Fire Department. Cite the rules and regulations of the Fire Department providing for the aforementioned activities.

Question 5. Answer each of the following subdivisions briefly and concisely. Quote where possible the Rules and Regulations, general orders or customs of the Fire Department in support of your answer.

A. Has the Deputy Chief in charge of a division any jurisdiction or supervision of the performance of the duties of a Medical Officer assigned thereto?
B. May a fireman maintain a legal and voting residence in Queens County and an actual residence in Nassau County?
C. May a member of the fire force voluntarily contribute to a political campaign fund?
D. May a fireman, while off duty and in civilian clothes be employed for a fee or salary as a coach in athletics at a private college?
E. May a subordinate prefer charges against his superior?
F. To what type of funeral escort is the body of a deceased retired battalion, chief entitled?
G. Name five assignments to which elderly firemen might be profitably assigned?
H. What funds, sale of tickets or contributions may firemen solicit?

Date: June 29, 1928.

Report, Weight 2—To be Finished With Rules and Regulations, Wt. 1, at 5:00 P. M.

Write a report of NOT *OVER* TWELVE HUNDRED (1200) WORDS addressed to the Chief of Department on the following subject. Elaborate discussions are not desired. Use enough words to express your ideas and no more:

The New York Board of Fire Underwriters has recently advocated the establishment of separate zones for manufacturing plants and industries which constitute similar fire hazards, and also of locating in the same buildings, industries involving similar risks.

Discuss the above proposition, from the standpoint of fire fighting, giving your reasons for or against the adoption of such a course.

N. B. 1—In rating this paper, the chief consideration will be given to the knowledge of the subject and value of the ideas expressed in the limited number of words allowed but consideration will be given also to conciseness, clearness and arrangement.

N. B. 2—Sign the name "John Doe, Deputy Chief" to this report. If you sign anything else, your papers will not be rated.

WITH THE EDITOR

Fire Officers as Orators One of the things that have been accomplished through the fire department taking an active part in fire prevention campaigns—both during Fire Prevention Week and in intervening intervals—has been the developing among its officers of an ability to talk fluently before an audience. Such a facility to express oneself smoothly and clearly in speaking to an assembly often lies dormant in the individual and only requires cultivation and practice to develop. The necessity forced upon fire department officers to take part in exercises in connection with such campaigns has probably done more to bring out such latent talent than any other thing. The added talent of public speaking is going to prove of inestimable benefit, not only to the individual himself, but also to his department and the city it represents.

It stands to reason that a man who has learned to think clearly upon his feet before an audience has acquired the habit of constructing and adjusting his ideas to fit the occasion, and this alone will increase his value as a commanding officer in time of emergency. Quick thinking when speaking will lead to quick thinking in action, and that, even more than any other thing, is a necessity for a fire officer.

A man who speaks easily and fluently and is able to express himself clearly and concisely, without undue hesitation, will quickly command respect from his subordinates.

Very true, there are many able officers in the fire department who are unable to express themselves in well arranged words. A poor speaker is by no means necessarily a poor officer. Quite the contrary, many chiefs and other officers who are considered at the height of their profession, are unable to make even a good short speech. But, if this gift is present, it should be cultivated to the advantage of the individual and his department.

What is "Department Duty" The question has arisen as to what is the legal interpretation of "Department Duty," as applied to the members of the fire-fighting forces. The Supreme Court of California has been asked to pass upon the matter, and the result will be looked forward to with considerable interest.

An Oakland, Cal., fireman's leg was broken while engaged in a fire department base ball game, and he was confined to the hospital for some time. He sued the city to force the payment of his salary during his stay at the hospital and his medical and hospital expenses. This was done on the ground that the fireman was injured in the line of duty, based upon the fact that every member is required to take a certain amount of exercise each day, including the playing of baseball or other games. He claimed that the injury was suffered while obeying that rule.

This is a rather important case, in that the decision will provide a precedent upon which future decisions in other states may be based. The decision, of course, will hinge upon what interpretation the court puts upon the term "exercise." If games and sports are included—and it would logically seem that, if sanctioned by the fire department authorities, they would be—then the claim of the fireman for compensation is certainly a just one.

The court decision will be awaited with no little interest by city officials and members of fire department ball teams alike.

Fire Exhibits at Local Expositions There is a great opportunity for the Fire Department to reach the public in local expositions in the home town, such as "Own Your Own Home" and agricultural shows, church and civic association bazaars, and so on. Exhibits at such functions serve a double purpose—they make the public better acquainted with the methods of the department and also bring the subjects of fire prevention and protection to its notice.

Such exhibitions and fairs occur at intervals in practically every town that shows progressiveness. In each event there is a chance for the department to get closer to the people in such matters.

The arrangement of exhibits of this kind need not be either expensive or difficult. A member of the fire department who is clever with his hands and another who is a good draughtsman can get up an excellent display with surprisingly little material to work upon. The labor in arranging such an exhibit can be done during off-hours, and with a few changes to give variety, the same general scheme could be used from year to year, without repeating similar features in any two expositions.

Expositions, fairs and bazaars are one of the best ways of obtaining the public's interest in matters of fire protection—a difficult task at best. When visiting such affairs the citizens are seeking diversion and anything out of the usual run will attract a crowd. Thus a fire exhibit, especially if it is known to be the handiwork of the local firemen, will be bound to intrigue the interest of the passers-by. Not only will it be an ex-

cellent advertisement for the local fire department, but it also will convey its lessons in a manner which will possess more than the average effectiveness.

Southern Regulars to Have Special Train

Those in the South and Southwest who are planning to attend the Convention of the International Association of Fire Chiefs at Philadelphia, October 17-20, will be glad to know that the Southern Regulars, under the direction of P. O. Hebert, will have a special train to make the trip as in previous years.

P. O. Hebert

The special train will leave from its starting point, Atlanta, Monday, Oct. 15th, at 12:05 p. m. over the Southern Railway, arriving at Philadelphia at 11:55 a. m. the following day. A special reduced rate brings the round trip fare from Atlanta to Philadelphia down to $41.81, a saving of half the fare one way. The Pullman fares are $8.63 for lower berth, $6.90 upper berth, and $31.50 for drawing room.

It will be a jolly good party, as it always is, and if you want to meet the "cream of the South" make your reservation now while suitable accommodations are available.

For reservations or any other information about the trip address P. O. Hebert, Candler Bldg., Atlanta, Ga. Mr. Hebert, who is arranging the party, has issued a pamphlet giving all the details, including a schedule of connecting trains from all points in the South.

N. Y. Firemen Selected for Trip to Italy

Fire Commissioner Dorman of New York has announced the personnel of the delegation of members of the New York Fire Department who will attend the International Congress of Fire Brigades at Turin, Italy, September 1st to September 5th inclusive. The invitation to attend the Congress was issued by the Italian Government through His Excellency, Nobile Giacomo de Martino, Italian Ambassador at Washington and transmitted through Mayor James J. Walker of New York.

The firemen designated will be relieved from all duty, effective August 1st, and will report to Capt. John J. McCarthy at the Drill Yard for instruction in handling two pieces of fire apparatus, H. & L. Co. 26 and Engine Co. 23, which will be shipped abroad with the firemen on the steamer Colombo on August 15th. Capt. McCarthy with his men will report to Chief Kenlon in Turin on September 1st.

Chief and Mrs. Kenlon and Dr. and Mrs. Harry M. Archer left on Friday, July 20th on the Scythia of the Cunard line for a tour of Europe. They will visit Ireland, England, Paris, Berlin, Lucerne and several other cities. While in Berlin they will be entertained for five day by Fire Chief Walter Gempp who spent a month in this country three years ago.

While Chief Kenlon is away, the uniformed force of the department will be in command of Assistant Chief of Department Joseph B. Martin. The roster of the delegation which will represent the New York Fire Department at the Congress is as follows: Fire Chief, John Kenlon; Honorary Medical Officer, Harry M. Archer; Fire Chaplain, Patrick F. O'Connor; Capt., John J. McCarthy, H. & L. 43; Lieut. Carmine Bracco, Eng. 13; Firemen—Thomas K. Larkin, Rescue, 1; John J. Delaney (1), Engine, 56; Andrew X. Quinn, Engine, 72; John Calzaretta, Engine, 277; Gerard V. Kammerer, H. & L., 3; James J. Virgilio, H. & L., 8; Joseph B. Gray, H. & L., 14; John J. Scudelleri, H. & L 16; Dominick J. Cervini, H & L. 26; William Ferrarini, H. & L., 32; Timothy J. Haggerty, H. & L., 38; Christopher P. Byrne, H. & L., 45; Paul F. King, H. & L., 45; Joseph Denardo, H. & L., 105; Vincent E. Lombardi, H. & L., 110; Benjamin W. Russell, H. & L., 118; James V. Albano, H. & L., 118; Anton Bondy, H. & L., 123.

WILLIAM JEROME DALY.

HOW CAN THE WATER DEPARTMENT COOPERATE WITH THE FIRE CHIEF?

Chief and Superintendent Should Study Each Other's System—Marking Hydrants and Use of Maps—Mains of Ample Size

By P. C. CHARNOCK,
Engineer, New England Insurance Exchange*

THERE are many instrumentalities which play a part in the art of fire extinguishment and protection on which the Fire Department must rely. Some of these are the fire alarm system, the police department, the building department, the State department of public safety, the various public service cooperation and the Water Department.

The cooperation of all of these agencies is essential to the Fire Department but probably the one of most importance is the Water Department. Without water the Fire Department is practically helpless and a water supply without a fire department to utilize it is of but little if any value. Therefore the two should go hand in hand to bring about the proper development of their functions.

Heads of Departments Should Arrange for Cooperation

To begin with, each department should have an understanding of the problems of the other department. In order that all the facilities in both Fire and Water Departments may operate as near to 100 per cent efficiency as possible during the progress of a fire, it is desirable that the two departments combine their efforts in harmony. To bring this about, each head of department should make a joint study of the many conditions which may arise and make arrangements to secure cooperation before the emergency arises. Is there any reason why this should not be done? In every large business the heads of the various departments have regular conferences where the problems of the business are discussed and plans are made whereby each cog will properly mesh. Fire-fighting is a business today—a big business—and growing by leaps and bounds with the many new hazards of our fast developing industries. We regret to state that in this great fire-fighting business these very desirable conferences are not as common as would be helpful.

The Water Department must furnish supply for household and manufacturing uses and in addition for fire demand. In the smaller water systems, the cost of providing suitable amounts of water for fire supply probably totals about seventy per cent of the entire cost of the system, whereas in the larger cities the cost of serving domestic consumers considerably outweighs the fire protection charges.

How the Chief Can Aid the Water Superintendent

We know that the officials of Water Departments or companies must watch the costs in laying distributing mains,

(*Continued on page* 648)

* From a paper read before the annual convention of the New England Association of Fire Chiefs at Burlington, Vt.

Twelve Lives Lost in Damascus, Syria Motion Picture Theatre Fire

Twelve lives were lost in a fire that originated in the operating room of the Victoire Hall Cinema, Damascus, Syria, and fire spread throughout the town. The entire town was engaged in fighting the fire but with little success. Large damages resulted. The fire was finally extinguished by French troops. The ruins of the motion picture theatre are seen smoldering in the illustration.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Finding Engine Horsepower

To the Editor:

I note in a recent issue of FIRE ENGINEERING a question on horsepower of gasoline motors. The S. M. M. T. formula given below gives about the nearest to actual delivered horsepower of any that I have seen. You might pass it on to your readers.

H.P. = 0.45n (b– 1.18) (b+s)
Where n = No. cylinders
b = Bore in inches
s = Stroke in inches

There is also a French formula given which gives slightly different results, but is useful in comparing motors at various speeds.

H.P. = c n b^2 s r
Where c = (for 4 cylinders) 0.000082
c = (for more than 4 cylinders) 0.000071
n = No. of cylinders
b = Bore (inches)
s = Stroke (inches)
r = Revolutions per minute

These formulas may help some of your readers in comparing horsepower of various trucks.

F. L. HUBBARD, JR.,
Port Washington, L. I., N. Y.

Another Formula

To the Editor:

In the issue of May 30, W. M. desires a method of finding the horsepower of a 5⅞" x 7" engine with a rated horsepower of 140.

The formula to use is the following, used extensively in aeronautical circles and applicable to all four stroke four cycle engines. $H.P. = \frac{B^2 S N R}{12{,}500}$, where B = bore in inches, S = stroke in inches, N = number of cylinders, R = revolutions per minute.

For example the Ahrens-Fox model H-P engine (the one W. M. evidently has in mind) works out as follows: $B^2 = 5\frac{7}{8} \times 5\frac{7}{8} = 34.515625 \times 7$ (S) = 241.609375 x 6 (N) = 1449.65625 x 1208 (R) (1200 R. P. M. is the speed of most fire apparatus motors) = 1751184.75 ÷ 12500 = 140.0 Horsepower.

Inasmuch as this formula takes into consideration the stroke and revolutions per minute it gives a correct result for all types of four cycle engines irregardless of the number of cylinders.

F. P. CULLEN,
Brooklyn, N. Y.

The question referred to in the foregoing letter is reproduced below together with the answer thereto, the same having appeared in the May 30 issue of this journal.

To the Editor:

Will you explain to me the method of working the following example, when solving for horse power?

"Motive power—6 cylinders, bore 5⅞ in., stroke 7 in. = 140 horsepower."

The formula, with which I am familiar: bore x bore x number of cylinders divided by 2.5 = horsepower, does not solve out anywhere near the rating given above.

I will greatly appreciate your straightening me out on this.

W. M.

Answer. Unfortunately there is no satisfactory formula at the present time for determining the horsepower of automobile engines, and here is the reason: Some of them are operated at higher speeds than others and are built to operate at such higher speeds. Still other engines are built with a large diameter and short stroke as compared to others with small diameter and long stroke. While the small diameter with long stroke gives a more efficient machine, the one with large diameter and short stroke might give more power for the same number of cylinders.

Both the Society of Automotive Engineers and the Association of Licensed Automobile Manufacturers employ the formula as given in your letter for determining horsepower. This formula is based upon the assumption that the piston speed is 1,000 feet per minute.

The figures stated in your problem, 140 H.P., may be the brake horsepower. This is determined by actually testing the power delivered by the motor when operating at its maximum safe load. The engine is connected to an electric dynamometer and the dynamometer shows by electrical readings just how much power is being delivered to it. Hence the 140 H.P. stated may be the actual H.P. delivered while that your secure by the A. L. A. M. formula is H.P., which would be recognized when comparing the particular engine you have in mind with another one.

Oil Losses in Storage

To the Editor:

Will you kindly answer the following questions in your Questions and Answers column of FIRE ENGINEERING at your earliest convenience?

Question 1. What is meant by breathing, evaporating, filling and emptying losses in regards to oil storage tanks?

Question 2. Is it true that gasoline will increase in volume during the warm weather?

Question 3. What is the reason for fire foam being ineffective on alcohol fires?

A. T. F.

Answer 1: By "breathing" losses is meant the losses of volatile liquids through the expansive effect of the heat during the day and cooling during the night. During the day when the temperature is higher, the liquids are heated, and vapors are thrown off. Some of these vapors will leave the tank through valves provided for that purpose and some still remain within the tank. At night time when the tank chills off, if the temperature is brought down to a sufficiently low point, the volume of the gases within the tank will be decreased and air will flow in from outside, diluting these gases. Then, as soon as the next expansion from sun heat occurs, these mixed gases are expelled. Such losses of gases represent a loss of the oil which produces them.

Evaporating losses refer to such losses caused by direct evaporation of the oil. Oils, when they vaporize, lose weight. The vapors are carried away by the air and the liquid (which they represent in vapor form) is thereby lost to the contents of the tank.

Filling and emptying losses either refer to losses due to spillage in filling or emptying. However, filling losses may refer, as well, to the displacement of vapors within the tank when oil is poured into the tank, the vapors being thereby displaced. These vapors represent a certain quantity of the oil which is thereby lost to the contents of the tank.

Answer 2: Gasoline may increase slightly in volume with the change in temperature during the day. But the greatest effect produced by warm weather is rapid evaporation of the gasoline itself which make up real losses during the course of a year.

Answer 3: Foam, such as used for fighting fires, is ineffective

on alcohol fires for alcohol apparently breaks up the foam as it reaches the alcohol. In other words, the foam will not "stand up" on an alcohol surface but, instead, is destroyed. Hence the smothering effect is largely lost.

Care of Fire Hose

To the Editor:

Will you kindly answer the following questions at an early date in the Questions and Answers department of your journal?

1. What is the maximum length of time that wet cotton hose should be left on a wagon truck after a fire?

2. How far apart should supports be secured to a charged length of hose which is hanging vertically?

3. If a situation arises in the line of duty of a fire lieutenant which is not covered by rules, he should:

Use his own judgment in the matter.

Always refer the matter to a superior officer.

Do as the majority of his men think best.

Confer with an officer in his command.

Answer the following four questions "False" or "True."

4. A member of the fire department must wear his uniform at all times when he is on duty.

5. The adequacy of fire escapes on buildings is determined by the company commander.

6. After placing the engine at a fire, the commanding officer directs his men to report to the seat of the fire.

7. All fire engines must be given a special trial test at least once a month.

8. What is pyroxylin, and from what is it made?

9. Is there a gas named "portain gas" or "potain gas," that is used for cooking on yachts? If so, what is it and give description of same?

F. B.

Answer 1. Wet cotton hose should be left on a wagon only until the wagon reaches the station after a fire.

Answer 2. The usual practice regarding supporting vertical hose lines is to support it at every second floor, which is approximately every 25 feet.

Answer 3. The lieutenant should refer the matter to a superior officer.

Answer 4. False. When men are at work cleaning apparatus, quarters, etc., old clothing is permitted in practically all cities to be worn.

Answer 5. False. The adequacy of fire escapes on buildings is determined by the Bureau of Buildings, Bureau of Fire Prevention or other bureau which has jurisdiction in the matter.

Answer 6. False. In reporting at fires (except engine and hook and ladder companies first due), commanding officers shall report personally to the officer in charge, and in no circumstances shall the members of their companies enter buildings until such time as orders have been received from their officers.

Answer 7. False. This depends upon the locality. Some cities require trial tests of pumpers once a month; other cities require the fire department only to turn the motor over three times a day.

Answer 8. Pyroxylin is usually made from cotton fiber which is treated with nitric acid. A number of cellulose (Pyroxylin) products are developed by this process. Among these may be mentioned gun cotton, which forms the basis of numerous high explosives; collodion, which is a solution of pyroxylin in a mixture of ether and alcohol, and which is extensively used in surgery and photography as well as for the production of artificial filaments.

The actual process of making cellulose is by taking hanks of cotton, free from impurities, and nitrating them in mixed acids, from which they are afterwards removed, dried in a centrifugal drier, washed in water until no acid reaction remains, and finally boiled in several stages of water. In its first stage it is yellowish, amorphous lumps; it is inflammable and explosive. It is used as explosive for torpedoes, production of collodion, celluloid, smoking powder, etc.

Answer 9. It is possible the gas you have in mind bears a trade name such as that you give. It is apparently not a standard gas. There are several compressed and liquid gases in commercial use for lighting and heating purposes, notably Pintsch gas for car lighting, compressed illuminating gas, petroleum distillate known as Blaugas, and other similar gases sold under trade names. These are usually stored under high pressure, and have a high rate of combustion.

Engine Performance

To the Editor:

Will you kindly answer the following problems for me?

1. A 1,000 gallon pumper is pumping through two parallel lines of 2½-inch hose each 100 feet long, to a deck gun equipped with a two-inch tip. Pump pressure is 140 pounds.

(a) What is the nozzle pressure?

(b) What is the discharge?

(c) What is the friction loss?

2. Employing the above layout, same size tip, and pump pressure, but using a 750 gallon pumper.

(a) Would the discharge be the same as from a 1,000 gallon pumper?

(b) Which pump would produce the better stream; that is less likely to spray?

(c) Why?

Thanking you in advance for your kindness, I am

D. F.

Answer 1: Let us consider the first part of your problem. Solving for nozzle pressure we get the following: Allow 10 pounds for friction loss and back pressure in deck gun. Then effective engine pressure which we have available for overcoming friction loss and giving nozzle pressure is 140—10 or 130 pounds.

Combine the two lines of 2½ inch hose into a single line by dividing by 3.6. Thus, 100 divided by 3.6 equals 27.8 feet of 2½ inch hose.

Employ Underwriter's formula for determining nozzle pressure:

$$N.\ P. = E.\ P. \div (1.1 + KL)$$

Substitute the values in this formula:

$$N.\ P. = 130 \div (1.1 + 1.55 \times .556)$$

Where K for 2½ inch hose and 2 inch nozzle is 1.55, and where the number of 50 foot lengths of hose in the line is .556.

$$N.\ P. = 130 \div (1.1 + .8618)$$
$$= 130 \div 1.9618 = 66 \text{ pounds approximately.}$$

With this pressure on a 2 inch nozzle we find the discharge as follows:

Discharge $= 2917 \times d \times d \times \sqrt{p}$ where d is the nozzle diameter and p, the nozzle pressure in pounds per inch.

Substituting these values we have:

Discharge $= 118.8 \times 8.12 = 965$ gallons per minute.

Now here comes the first question in this layout. Your 1000 gallon engine is supposed to deliver 1000 gallons per minute at 120 pounds pressure. At 140 pounds pressure it could be expected to deliver not more than 860 gallons per minute.

But you will note that a 2-inch nozzle at 66 pounds pressure will be discharging 965 gallons a minute. Hence it is safe to assume that the layout as given in your first problem is impractical—that is, where an engine pressure of 140 pounds is desired.

As to your second question, this would be still more impractical. A pumper which is capable of delivering 750 gallons per minute at 120 pounds pressure could not, of course, deliver 965 gallons per minute at 140 pounds pressure.

This much might be said, in general, regarding engine discharges and fire streams. If two engines, one larger than the other, are capable of maintaining a certain pressure at a certain size tip, the streams should be identical. In other words, if two engines each maintain a pressure of 100 pounds at a 1½-inch nozzle, each stream would be precisely like the other. Where the difference comes in is where we expect to operate large nozzles at fairly high pressures. In such a case, one engine may be capable of maintaining the desired pressure at the nozzle while a smaller size engine could not maintain that pressure.

New Apparatus Delivered to Cedarburg, Wis.—A 600-gallon Pirsch pumper and a Pirsch ladder truck have been delivered to Cedarburg, Wis. The pumper has two eighty-gallon chemical tanks. The pumper also carries foam equipment.

BURNING OIL IN TANK PLANT BLAZE SETS FIRE TO NEARBY BUILDINGS

One Man Killed in Five Alarm Fire in Syracuse, N. Y.—Many Large Tanks in Yard Collapse with Intense Heat

AN unknown explosion that started in the yard of the Sunco Oil Company, at Syracuse, N. Y., killed one person, severely burned another, and started fires in nearby wooden buildings.

The plant covered an area of about one city block. The buildings were mostly one and two story structures from five to fifteen years old. They were constructed of iron and frame, and some had partition walls.

Tank Explosion Destroys Sunco Oil Co. Plant in Syracuse

Twisted iron is all that is left in many places after a fire in the plant that lasted eighteen hours. Some of the tanks wrinkled up from the intense heat, and oil from others ran out in a stream and started fire in nearby buildings.

The first alarm was turned in at 11:35 p. m. There was no private protection at the plant. When the firemen arrived, it appeared as though the entire plant was on fire. Two other fire alarms were turned in and a special call sent for two additional pumpers. The men could not approach close to the fire because of the intense heat from the tanks.

There were nine pumpers, three truck companies and ninety firemen at the blaze. Fifteen hydrants supplied by a gravity water system were used to supply the various pumpers. Eighty pounds pressure was available at the hydrants. Eighteen hose streams were used including two streams supplied by two foam generators.

The tanks that caught on fire were near a string of loaded railroad cars. The train was moved to a point outside of the danger zone. Fire spread to Warner's Macaroni Factory, the Gulf Refining Company, and the Spencer Filling Box Company. The fire was one of the most severe blazes in recent years. In the eighteen hours that the fire was burning, a large amount of property, including plants in the vicinity of Sunset avenue and Turtle street were damaged. No estimate has been made of the property loss. At one time the blaze appeared so serious that people living in that vicinity were ordered from their homes. Later they were allowed to return. A large amount of twisted iron and metal marks the location of what was once a large oil tank yard.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to latter investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending July 13

PITTSBURGH, PA.—Cameo Theatre damaged	80
GREENWICH, CONN.—Yacht owned by C. M. Monroe	40
JACKSON, MICH.—Plant of Jackson Screw Products Co.	35
PATERSON, N. J.—Church of Redeemer destroyed	400
MINOT, N. D.—International Oil Co. plant	100
EASTVILLE, VA.—Several business establishments	40
DENTON, TEX.—Main bldg. Denton Milling Co.	40
PURSGLOVE, W. VA.—Liberic Daisass Bldg. destroyed	25
WEST POINT, N. Y.—Stable No. 2, U. S. Military Academy	25
BRONX, N. Y.—Unfinished Grant Ave. Apt. Bldg.	40
MILWAUKEE, WIS.—Elevator, J. M. Riebs Co.	200
WARNERS, N. J.—Barge and dock, Warner-Quinlan Co.	80
RALEIGH, N. C.—Parborough Hotel destroyed	400
EFFINGHAM, ILL.—Michaelree Garage destroyed	80
ST. CHARLES, VA.—Plant Elec. Transmission Co., at Pocket	185
WHITE LAKE, N. Y.—Ice houses of Utica City Ice Co.	80
BLACKSTONE, VA.—Several blocks of business property	250
CLINTONVILLE, WIS.—Plant of Clintonville Milk Co.	80
WYMORE, NEB.—M. L. Rawlings & Sons ice houses	40
SARNIA, ONT.—Mill of Laidlaw Belton Lumber Co.	125
KLAMATH FALLS, ORE.—Sewanua Box & Lumber Co. mill	150

(*Continued on page* 651)

Riverhead, N. Y., Wants Pumper—Firemen in Riverhead, L. I., N. Y., are trying to obtain a new pumper estimated to cost $6,000.

Courtesy, Syracuse Post Standard

An Oil Fire Is Far From Child's Play

The above are two scenes taken at Sunco Oil Company's plant in Syracuse, N. Y., after fire broke out in several oil tanks. Upper, all that is left of a corrugated sheet iron building, and, lower, firemen cooling a number of oil tanks.

Southeastern Chiefs Hold Convention

(Continued from page 637)

be a "Cody" meeting. The discussion had opened on the subject of the proper color for fire hydrants, and Chief William B. Cody, of Atlanta, host of the convention, had related some interesting experiences of his long career as a fire-fighter. During this talk he mentioned the fact that when the chiefs again met in Atlanta he would not be present to greet them, as on this occasion, and how much he regretted leaving the Fire Department.

Spontaneous Tribute to Chief Cody

He had no sooner taken his seat, than many chiefs and other guests at the smoker were instantly on their feet seeking recognition, to urge Chief Cody to reconsider his decision to retire from active fire duty.

Member after member rose to speak in eulogy of the veteran head of the Atlanta Department and to tell him that all felt he had many more years of useful service in the Fire Department.

Several Topics Treated at Friday's Sessions

Friday's morning session was taken up partly by various committee reports. The topics treated were: "Fire Prevention, Inspections, Etc.," by Chief D. W. Brosnan, Albany, Ga., and "Community Fire Fighting," by Chief John H. Monroe, Savannah, Ga. Both papers were freely discussed by the members present.

Official Photograph of Convention

At the conclusion of the morning session, the members and their ladies and guests were assembled in front of the Auditorium Armory and the official photograph was taken.

Two Papers in Afternoon

The afternoon session was taken up with the discussion of two papers. The first was treated by Sherwood Brockwell, and his topic was "Volunteer Fire Departments — Care of Equipment — Drills."

The second paper was on "Speed of Apparatus Answering Alarms." This was treated by Chief R. A. Foster, of the Norfolk, Va., Navy Yard. Several members took part in the discussion which followed.

Banquet and Ball in Evening

The evening of July 6 proved both interesting and enjoyable. It began with a very fine banquet, in the beautiful Roof Garden of the Hotel Ansley, which was generally attended by all those present at the convention. This was followed by a ball, at which the members danced until the small hours of the morning.

Election of Officers on July 7

The final business session opened on the morning of July 7 with an address by Jay W. Stevens, State Fire Marshal of California and Executive Secretary of the International Association of Fire Chiefs.

The election of officers resulted as follows, the entire board of officers of the association being reelected:

President, Chief J. T. McNulty, St. Petersburg, Fla.

Members, Associates and Guests at the First Annual Convention of the Southeastern Fire Chiefs' Assoc... Atla...

First Vice-President, Chief F. E. Donnald, Greenville, S. C.
Second Vice President, Chief D. A. Copland, Columbus, Ga.
Secretary, Chief H. E. Whitener, Hickory, N. C.
Treasurer, Chief Donald White, Florence, Ala.

Careers of the Officers

Of the officers of the association, President J. T. McNulty was appointed as a fireman in 1893, at Meridian, Miss., as a horse-holder. He resigned from this department in 1900, and reentered it in October, 1901. He finally left the Meridian Fire Department in 1905. He joined the Ensley, Ala., Department in 1907, and was later moved to No. 1 Co., at Baltimore, Md. He remained in the Baltimore Department until appointed Chief of the St. Petersburg, Fla., Fire Department on April 3, 1913. He still holds the latter post. His department now has six fire stations.

First Vice-President F. E. Donnald was appointed to the Greenville, S. C., Fire Department in 1910. He rose through the various minor offices, and was elected chief in 1920. During his incumbancy, the two-platoon system has been adopted for his department. He also was instrumental in having an anti-wooden shingle

ordinance passed by his city council. He has had the salaries of his men raised twice, each time 10 per cent.

Second Vice-President D. B. Copland entered the Columbus, Ga., Fire Department as a supernumerary in 1901 and was regularly appointed as a private in 1902. He was elevated to the rank of lieutenant 1903, and made a captain in February, 1906. In 1917 he was elected to the position of assistant chief. He became Chief early in 1922. When he joined his department, its apparatus were horse drawn and there were 27 men, with taxable city values of $13,000,000. At the present time the department is completely motorized, with a personnel of 61 men, consisting of five pump companies, one hose company and two hook and ladder companies. The city's values now amount to $45,000,000.

Resolutions Adopted

The convention adopted the following resolutions, on the recommendation the Committee on Resolution, Chief R. A. Foster, Chairman:

"We, the Committee on Resolutions, wish to present the following Resolutions in recognition of the many kind things that have been extended to the Southeastern Division of the International Association of Fire Chiefs in their Convention in Atlanta, from July 5 to 7.

"We wish to thank the officials of the City of Atlanta, especially Guy Dobbs, Chairman of Official Entertainment Committee, for the pleasant and complete arrangement of entertainment that his Committee has so successfully made for our stay in your city.

"We further wish to mention and recommend to this convention the untiring and earnest efforts that have been extended to us by the offices of the Eureka Fire Hose Manufacturing Company and the American-LaFrance and Foamite Industries, Inc., and especially wish to mention the valuable service rendered to us in helping to prepare the details of our program and assisting our Secretary in details that were necessary to that office by Miss C. L. Flynn, Secretary of P. O. Hebert, and by his entire staff of ladies in their attention to the wives and children of the attending delegates to this convention, and to Pat Hebert, my dear friend, for his interest and untiring efforts in making this convention a success; also Mrs. Howard C. McCutcheon, Chairman Ladies' Reception Committee of the City of Atlanta.

"We further wish to thank the management of the local establishment of the Sears, Roebuck and Company of Atlanta, Ga., for their very nice luncheon and inspection tour of the beautiful plant while in the City of Atlanta.

"We also wish to extend our thanks to the management of the Ansley Hotel for the many courtesies which we have received while using his hotel as headquarters for our convention.

"We wish to further thank the untiring efforts on the part of the firemen of our able Brother Fire Chief William B. Cody and to the men in his command who have seen to the transportation and the guidance of our delegates in helping to make our stay here as happy and as pleasant as possible.

"We also wish to thank the contributors of the Exhibits at this convention in helping to make this convention a success.

"Your committee asked that a rising vote of thanks of the convention and a copy of this resolution be sent to the persons mentioned here above and spread upon the minutes of this convention."

Barbecue at Stone Mountain

At 12:30 p. m., on Saturday, July 7, the entire convention was taken in busses to the famous Stone Mountain, where an excellent and enjoyable barbecue was given them. This closed the convention.

(*For list of attendance, see page* 650)

Statistics Issued on Northwest Departments—W. H. Anderson of Mankato, Minn., has just completed a survey of fire departments in the northwest. Tabulations of the survey are being distributed by the League of Minnesota Municipalities. The report gives information on fire department personnel, types and number of alarms used, apparatus, drill and hose used, and so forth. It is believed that this is the first time that a survey of this kind has ever been attempted.

Associa Atlanta, Ga., on July 5 to 7, Assembled in Front of the Auditorium Armory on July 6, at 11:30 A. M.

Seattle Found Defects in "Alki"—Following an inspection by a naval architect, twenty-five defects have been found in the fireboat "Alki" in service in Seattle.

Wisconsin Firemen to Meet in Edgerton—The 1929 convention of the Wisconsin Firemen's Association will be held in Edgerton, but the date has not been selected. At the convention just held in Kiel, President Wipperman was presented with a bronze emblem by Mayor H. H. Niemeyer on behalf of the association. Mr. Wipperman has had control of the association for the past five years, and has increased the membership from forty-nine to 170 companies.

Here's a New Job for Ex-Chief Seyferlich—Being a song leader is far different from being a fire department chief—Ex-Chief Arthur Seyferlich, former chief of Chicago and now chief of fire prevention and safety of the Sanitary District, has developed into a leader of community singing. That is only his avocation, but he gets a great deal of enjoyment from it. In addition he announces the program at radio station WLS broadcast by the American Admirers of German Art. All in all, Mr. Seyferlich said that he is a very busy man.

How Water Department Can Cooperate

(*Continued from page 642*)

installing hydrants and valves and again in the maintenance of these hydrants and valves. Yet if the Fire Department could be in a position where it could state what the needs are for fire supply in the various sections of the city, to anticipate what will be needed in the future in a new development, and to definitely give the locations where hydrants should be placed, we would find that many of the weak spots often found in a water system would not develop and would thus aid the Water Department in moulding public opinion necessary to provide the funds to make the essential installations.

The chief of the Fire Department can help the water Superintendent. A few cases have come to my attention where a chief has procured testing gages and apparatus and conducted tests in various parts of the water system in his municipality. Tests of this nature are not intricate. Hose lines can be laid from one or more hydrants and quantities measured and pressures remaining on the system recorded. By this method, the Chief can readily determine whether in case of a serious fire in a given locality, he can depend on obtaining a sufficient flow, he will learn whether one or more streams direct from hydrants may be used or that he must rely entirely on his pumping engines. The mere fact that a good pressure is found on the system with the hydrant outlets closed does not tell the story, this may drop to practically zero if the water mains are not of proper capacity. By making tests of this nature, and they preferably should be conducted in conjunction with the water department, each man will gain much knowledge and the two together can then lay the foundation for strengthening the weak spots.

Marking Hydrants as to Value in Fire-Fighting

I recently was privileged to listen to a very splendid discussion somewhat along these lines at a meeting of a water utilities association in one of our New England states where cooperation of this nature was solicited.

One item in particular in that discussion which was advanced as being desirable for both the Fire and Water Department was, the marking of hydrants as to their value to the fire department, such as "good," "fair" or "poor," depending on the number of pumping engines or hose streams each would supply, or, the marking of the pressure on each hydrant.

It does not seem that either of the two suggestions would give as complete information as is needed, for in the large fire at some hazardous location the one hydrant marked as "good" might be only "fair" or "poor" if one or two additional hydrants are opened. And for marking the pressure it would appear this would be of value only when possibly two separate service mains happened to be in the same street.

Advantages of Distribution System Map

It is my impression that much more can be gained by having a map of the water distribution system in each fire station, assist the men in studying the sizes of mains and hydrant locations and in making actual tests on the system before the fire occurs.

We have had many opportunities to witness fire departments operate at fires and recall where at what might have been a very serious situation in the center of a moderate sized town, the department which consisted largely of call men, laid every foot of hose it owned, some ten lines. As each succeeding line was laid in, the effectiveness of the first streams was diminished. In this particular town we had just about completed our inspection of the fire-fighting facilities and knew about how much water was available. The town had recently installed a 750-gallon pumper and when the large number of weak streams on this fire were noted we were interested to learn why there were not a few good ones. The pumping engine was found parked at a point where the last piece of hose was pulled off and it was stated by the department that a sufficient number of good streams were in use without the pumper. When it was pointed out to the chief that every stream was weak and broken before it reached the fire, the pump was then placed in operation with three short lines and by diplomatic urging only one direct hose line from a hydrant was continued in use.

The water system at this point was good for only four to five good streams. The Fire Department had the idea that as there was 80 pounds pressure on the mains an unlimited supply was available.

Defective Protection of 6-Inch Mains

I am reminded of a striking instance in a water system which for the most part is good but where gradually a 6-inch pipe line has been extended for approximately five miles. This serves a good number of houses with domestic supply and as hydrants have been installed these property owners are under the impression they have good fire protection. Probably on the average not over 100 gallons per minute could be drawn from the hydrants, which we all understand is a very small stream for a fire of any size. There certainly was not any cooperation from the Water Department in this case but if the Chief of the Fire Department could have had an opportunity to explain how inefficient the supply would be, I am confident the Water Department would have found the means of furnishing a much larger pipe line to protect the property along this road.

How Else Can Water Works Officials Assist?

What other ways are there where the water officials can assist the Fire Department? You as heads of the Fire Department would like to know when any hydrant is put out of service, or when valves on the system are closed for any length of time which often results in shutting off a number of hydrants on one or more streets. Some Water Departments are careful to see this information is promptly transmitted by telephone to the fire headquarters and later confirmed by a written notice, and when the hydrants are back in service the same procedure is followed. In other places no advices are given the Fire Department, which naturally may some time place that department in an awkward position.

Some employee of the Water Department should attend all fires in important districts and to second alarms at any part of the city. The interested water official will see that this is done and if others find the chief of the Fire Department desires that such arrangements be made, I will prophesy they will always attend. The Fire Department can assist here by having tappers from the fire alarm system installed in the water works office and superintendents dwelling. The importance of this is as great in the small towns and cities as it is in the larger cities.

The Fire Department can profit well by procuring a hydrant of each type used in the city for demonstration purposes, to show how the moving parts are constructed, the proper method to follow in opening and closing, and explain the damage that may result in case it is closed too rapidly. Many water works men claim if this is followed their departments would not be criticised for having faulty hydrants.

I have cited a few cases where team work between these two important branches of fire protection service should prove of value in increasing efficiency of operation. If we could have established in each city and town a "Board of Directors" to include the Chief and the Water Superintendent among the other department heads, where these all-important matters would be discussed in a true cooperative spirit, the results could not be otherwise than beneficial.

Troy, N. Y., to Improve Fire Stations—Troy, N. Y., has appropriated $50,000 with which to improve the fire stations.

Romulus, Mich., to Buy Fire Apparatus—Farmers in the vicinity of Romulus, Mich., are to purchase apparatus for farm fire protection.

Sioux City, to Improve Fire Alarm—Sioux City, Ia., will sell $30,000 bonds to finance improvements to the fire alarm system, and construction of a fire alarm central. Contract for the equipment has been let to the Gamewell Co.

Frostburg, Md., Proud of Its Pumper

Firemen of Frostberg, Md., are proud of their Studebaker pumper. The apparatus is capable of delivering several good size fire streams in addition to a small stream through the chemical hose.

APPARATUS MANUFACTURERS MEET TO CONSIDER PUMPING CAPACITIES

Held at U. S. Department of Commerce on June 17—Plan for Simplified Practice Recommended

ON account of the relatively small number of fire engines produced annually, as compared with other manufactured products in the mechanical line, there has been a natural tendency toward diversification, in an effort to exactly meet the requirements of users. This tendency has resulted in a constantly growing diversity in all features of this product, including rated capacities. Manufacturers and users have recognized the fact that unnecessary diversity of size or capacity results in increased costs and slower service, and makes it difficult to manufacture parts for stock.

About six months ago, a number of manufacturers cooperated to secure figures in regard to existing diversity, and after a number of preliminary meetings, a Simplified Practice Committee of manufacturers formulated a list of standard pumping capacities. This list was approved by manufacturers at a meeting of the Fire Equipment Institute at Hot Springs, Va., on May 28, 1928, and the Division of Simplified Practice was then requested to call this general conference for the purpose of acting upon the recommendations approved by the manufacturers.

General Conference Held at the Department of Commerce, Washington, D. C., June 27, 1928

This conference was held under the auspices of the Division of Simplified Practice, for the purpose of acting upon recommendations prepared by manufacturers of fire apparatus covering pumping capacities of fire engines. R. L. Lockwood of the Division of Simplified Practice reviewed the development of the project, explained the method of arriving at the simplified list of capacities as proposed, and read letters of indorsement from manufacturers and others interested.

A. C. Hutson of the National Board of Fire Underwriters spoke concerning the necessity for a limited number of standard or "stock" capacities for pumping engines, mentioning the tendency toward diversity in capacity caused by a continual effort to reach higher ratings. He stated that the National Board of Fire Underwriters favored the recommendation here proposed, limiting the number of capacities to five.

The chairman brought up the matter of adding to the list the 600-gallon capacity pumper which had been suggested by some manufacturers as being advisable to retain. The matter was discussed by Messrs. A. C. Hutson, A. O. Boniface, F. G. Oakley, George S. Watson, and D. C. Fenner.

A motion was made and seconded that the list of capacities proposed by the manufacturers, representing an elimination of approximately 75 per cent of existing capacities, be adopted. After some discussion, the motion was carried, and further discussion proposed in regard to the appended note explaining the availability of 300- and 400-gallon capacity pumping engines.

Mr. Watson suggested the inclusion of some expression regarding the protection afforded by fire engines of less than 500-gallons capacity, and stated that in his opinion this conference might go on record as favoring suitable recognition, in the form of insurance credits or otherwise, of the protection thus afforded.

This matter was discussed in detail by Messrs. Hutson, Cook, Boniface, Oakley and Watson. The attention of the conference was called to the "Suggested Specifications for Gasoline Automobile Fire Apparatus," Edition of 1928, issued by the National Board of Fire Underwriters, particularly the paragraph on page 3 mentioning pumpers of 300- to 400-gallons capacity.

After further discussion, the recommendation as set forth in this report was unanimously adopted.

Mr. Hutson brought up for discussion the existing practice of including in specifications for pumping apparatus a requirement for overload capacity in volume or pressure, and expressed the opinion that such practice caused unnecessary hardship to apparatus manufacturers.

This question was discussed by Messrs. Watson, Fearn, Boniface, Oakley and Meigs, and on motion duly made and seconded, the following resolution was passed:

"It is the sense of the conference that the practice of including in specifications for pumping engines a requirement for overload capacity should be discouraged, on the ground that it tends to cause hardship to manufactures of this equipment, particularly in view of the fact that this practice, as now carried on, is not uniform as to the overload capacities specified."

The following Standing Committee was appointed to have general charge of the promulgation and establishment in use of the recommendations here adopted, to review the adherence to the recommendations one year from the effective date agreed upon, and to then reaffirm the recommendations or modify them, if necessary, to meet changed conditions or new development:

Meigs, Chas. H., commisisoner, Fire Equipment Institute (chairman).
Cook, S. O., treasurer, Boyer Fire Apparatus Co.
Davis, Ross B., president, International Association of Fire Chiefs.
Fenner, D. C., vice-president, Mack International Motor Co.
Watson, George S., chief engineer, Washington, D. C., Fire Department.
Ex Officio: Hutson, A. C., National Board of Fire Underwriters.
Lockwood, R. L., division of simplified practice.

Mr. Hutson spoke concerning the existing variety in hose threads, couplings, nozzles, etc., and advised that some action be taken toward reducing such variety. This matter was discussed at length by Messrs. Hutson, Meigs, and Hanson. The Chairman explained that the Division of Simplified Practice was not now engaged in any project for simplifying these items, but that other agencies had already undertaken work along these lines. He stated that, if requested to do so by any organized group in the industry, the Division of Simplified Practice would undertake this or other projects which seemed to offer an opportunity for waste elimination.

The following recommendation was made:

"Fire Engine Pumping Capacities—Simplified Practice Recommendations

"In accordance with the unanimous action of a general conference of representative manufacturers and users of fire engines, held on June 27, 1928, the Department of Commerce submits for the approval of the industry the following simplified schedule of fire engine pumping capacities:

*300 gallons per minute at 120 pounds pressure per square inch.
*400 gallons per minute at 120 pounds pressure per square inch.
500 gallons per minute at 120 pounds pressure per square inch.
750 gallons per minute at 120 pounds pressure per square inch.
1000 gallons per minute at 120 pounds pressure per square inch.

"NOTE.—Capacities marked (*), or any other capacities less than 500 gallons per minute at 120 pounds pressure per square inch, are not recognized as standard by the National Board of Fire Underwriters. 'These machines are within the reach, financially, of villages and rural districts which otherwise could not buy equipment; they are more generally effective than the usual chemical engine in territory without a water works' system, as some suction supply usually can be found. It must be recognized, however, that in some states little or no credit is allowed by the insurance rating organization for pumping capacity of less than 500 gallons a minute in one or two pumpers.'

"The portion of the above resolution between quotation marks is quoted verbatim from the paragraph above referred to in the Specifications of the National Board of Fire Underwriters. The term 'insurance rating organizations' mentioned therein refers to local rating bureaus, not to the National Board of Fire Underwriters.

"If approved, this recommendation is to become effective October 1, 1928.

"R. M. HUDSON,
"Assistant Director, Commercial Standards.
"GEORGE K. BURGESS,
"Director, Bureau of Standards."

It was the sense of the meeting that the existing committees of fire apparatus manufacturers should continue their work of collecting the necessary data for such projects, and request the cooperation of the Division of Simplified Practice whenever that Division can be of service. The meeting adjourned at 12:45 p. m.

Those who attended the general conference were:

Boniface, A. O., American-LaFrance and Foamite Corporation, 250 West 57th Street, New York, N. Y.
Cook, M., Boyer Fire Apparatus Co., Logansport, Ind.
Fearn, O. E., superintendent of machinery, Fire Department, Washington, D. C.
Fenner, D. C., Mack International Motor Truck Corporation, 25 Broadway, New York, N. Y.
Gousha, H. B., St. Elizabeth's Hospital, Washington, D. C.
Hansen, Albert E., Elkhart Brass Manufacturing Co., Elkhart, Ind.
Hawley, Wm. G., American-LaFrance and Foamite Corporation, Elmira, N. Y.
Hutson, Arthur C., National Board of Fire Underwriters, 85 John Street, New York, N. Y.
Mattingly, F. H., construction division, U. S. Veterans' Bureau, Washington, D. C.
Meigs, Chas H., Fire Equipment Institute, 17 East 49th Street, New York, N. Y.
Oakley, F. G., Sanford Motor Truck Co., Syracuse, N. Y.
O'Connor, Thomas, battalion chief, Fire Department, Washington, D. C.
Watson, George S., chief engineer, Fire Department, Washington, D. C.
DEPARTMENT OF COMMERCE, WASHINGTON, D. C.:
Lockwood, R. L., division of simplified practice, Bureau of Standards.
Tillman, S. F., division of simplified practice, Bureau of Standards.

Registration at Atlanta Convention of the Southeastern Fire Chiefs' Association

BELOW is a list of Active and Associate Members registered at the Atlanta, Ga., Convention of the Southeastern Fire Chiefs' Association, on July 5 to 7:

ALABAMA

Anniston—Chief D. C. Rainwater; H. W. Edwards; M. H. Valve Co.
Bessemer—Chief and Mrs. L. B. Hill; R. B. Morton; Miss Lola Beck.
Birmingham—Chief J. L. Akin; J. H. Taylor, Coms. Public Safety; Mrs. Robert Hanke; Louis R. Lehr; Roy Turner.
Decatur—Chief J. I. Reeder.
Dothan—Chief and Mrs. Z. E. Ziglar.
Evergreen—Chief Grady Moorer.
Florence—Chief and Mrs. Donald White.
Huntsville—Chief and Mrs. R. M. Milam; Miss Eula Acuff.
Gadsden—Chief S. T. Green.
Mobile—Chief Gus Rehm; E. K. Hughes, Master Mechanic.
Montgomery—Chief and Mrs. C. L. Ingram.
Opelika—Chief A. R. Plott.
Oxford—Chief and Mrs. W. M. Stevens.
Phenix City—Roy H. Clegg.
Selma—Chief J. W. Blakely; Capt. Anderson.
Sheffield—Chief J. K. Johnson.
Tuskegee—Chief C. H. Thrasher; C. L. Averett, Asst. Chief.

FLORIDA

Coral Gables—Chief and Mrs. M. P. Lehman.
Daytona Beach—Chief B. B. Hart.
Fort Lauderdale—Chief John L. Cody; Miss Frances L. Robinson; Mrs. Geo. Robinson; Cyrus H. Robinson.
Fort Pierce—Chief R. E. Mims.
Gainesville—Chief E. F. Beville.
Hialeah—A. K. Ewing, Chrm. Public Safety.
Hollywood—Chief and Mrs. R. N. Hershey and Miss Hershey.
Jacksonville—Chief H. R. MacMillan; F. W. Knoffle.
Key West—Chief and Mrs. R. B. Pinder.
Lake City—Chief and Mrs. G. O. Adicks.
Lynn Haven—Chief D. L. Jarvis.
Melbourne—Asst. Chief D. C. Johnson.
Ocala—Chief S. W. Peck and Misses Elsie and Julia Peck.
Orlando—Chief W. M. Dean; R. Coram.
Palm Beach—Elmer Schultz, Jr.
Plant City—Chief and Mrs. C. G. Culbreath.
Pompano—Chief F. A. Hunter.
Rockledge—W. H. Bower.
St. Petersburg—Chief J. T. McNulty.
Sanford—Chief M. N. Cleveland.
St. Augustine—Chief C. P. Townsend.
So. Jacksonville—Chief R. Smith.
Tallahassee—Chief C. P. Coe.
Tampa—Chief W. M. Matthews.
Titusville—Chief D. A. McIntosh.
Winter Haven—Chief F. C. Pfaender; L. A. Daniel.
West Palm Beach—Chief A. P. Sadler.
Miami—Chief E. J. Roberts; Dist. Chief S. D. Long.

GEORGIA

Albany—Chief D. W. Brosnan.
Athens—Chief D. A. Watson; J. H. Enting, Chairman Fire Committee; R. E. Wilson, Commission; Ex-Chief Geo. McDorman.
Atlanta—G. M. Altizer, G. Wallace Bailey, H. B. Cummings, J. C. Dorn, J. O. Eaves, Joe V. Elgin, S. R. Latta, F. K. Langston, J. S. McGehee, M. T. Mahone, C. B. Payne, R. L. Pringle, B. H. Safge, T. O. Stewart, Roy S. Timmerman, H. H. Timmerman, G. B. Carlton.
Augusta—D. R. Snider, Supt. Elec. Dept.
Americus—J. B. Hayes.
Bainbridge—Chief H. B. Rich.
Brunswick—Chief J. H. Harrison.
Cartersville—Chief B. L. Mills.
Carrollton—Chief W. S. Brock.
Cedartown—Chief and Mrs. C. I. Scarbrough.
College Park—Chief T. L. Newbern.
Columbus—Chief D. B. Copland; Capt. Pitts; J. A. Copland.
Cuthbert—Chief A. H. Crozer; W. W. Broach, Chairman Finance Committee.
Cornelia—Chief V. M. Crawford.
Cordele—Chief Roy C. Thompson.
Dublin—Asst. Chief Otis B. Rawls; Chief R. C. Garrard; M. C. Jernigan, Chrm. Fire Committee.
Dawson—Chief S. W. Kenny.
Dalton—Chief W. H. Perry.
Elberton—Chief B. B. Jones; R. H. Johnson, Mbr. of City Council.
Fitzgerald—Chief J. P. Horne.
LaGrange—Chief C. W. Corliss.
Griffin—Chief J. J. Powell; Chief C. T. Thornton.
Macon—Chief and Mrs. H. J. Williams.
McDonough—Chief H. C. Hightower; Mr. C. J. Dickson.
Moultrie—Chief G. B. Hunt.
Newnan—H. A. Gilbert.
Quitman—Chief J. M. Ostreicher.
Reynolds—Chief H. T. Saunders; R. R. McGuggin.
Rome—Chief H. L. Taylor; S. S. King, City Manager; Albert Sharpe.
Savannah—Chief John H. Monroe; Thos. Ballantyne, Ex-Chief; Wm. Ballantyne.
Thomasville—Chief J. E. Porter.
Warrenton—J. F. Ricketson, Mayor & Pur. Agent; A. W. Davis, Member City Council.
Waycross—Chief H. C. Thackston.
West Point—Chief R. S. Reed; J. Barrow, Supt. Water Works.
Winder—G. M. Ferguson.

KENTUCKY

Fulton—Chief and Mrs. Lee Roberts; R. T. Taylor.
Georgetown—Chief C. G. Hawkins.
Madisonville—Chief J. Y. Farmer.

MISSISSIPPI

Canton—Chief F. A. Baine; Fred White, Mbr. City Council.
Hattiesburg—Chief C. E. Norsworthy.

NORTH CAROLINA

Asheville—Chief and Mrs. A. L. Duckett; J. H. Wood, D. P. A., S. R. R.
Biltmore—Mrs. R. D. McCurry; Chief Robert McCurry.
Bryson City—Chief E. E. Ellas.
Burnsville—Chief and Mrs. C. W. Valentine.
Brevard—J. S. Broomfield.
Charlotte—Chief W. H. Palmer.
Durham—Chief and Mrs. F. W. Bennett.
Fayetteville—Chief B. M. Ward; E. L. Strickland, Secty.
Forest City—W. E. Moore, Comm.; H. H. Doggett, Comm.; B. B. Green, Supt. W. & L.; V. T. Davis, Comm.; Chief Chas. R. Price.
Gastonia—Chief G. F. McLaughen; C. M. Ferguson, Mech.
Greensboro—Chief and Mrs. F. D. Shaw.
Henderson—Chief J. E. Parks; J. W. Newton.
Hickory—Chief and Mrs. H. E. Whitener; Ezra Rink; Donald Wilfong; Donald Shuforth.
High Point—Chief A. B. Harney.
Kinston—Chief W. E. Bailey.
New Bern—Chief A. W. Jowdy; J. I. Bryan.
Raleigh—Chief W. E. Holland; J. Sherwood Brockwell; E. G. Birdsong, Comm.
Rocky Mount—Chief and Mrs. Geo. Mabry.
Shelby—Chief E. B. Roach; E. H. Eskridge, Asst. Chf.
Spencer—Chief J. C. Vaughn.
Wilmington—Chief and Mrs. Chas. Schnibben; Walter Blair, Mayor.
Winston-Salem—Chief H. E. Nissen.

SOUTH CAROLINA

Abbeville—Chief C. P. Townsend; Chas. Darricatt.
Aiken—Chief I. M. McCarty.
Anderson—Chief F. F. McConnell; Chrm. W. T. Bailey, Fire Committee.
Clinton—Chief V. P. Adair; E. B. Sloan, Mayor.
Columbia—Chief A. McC. Marsh; W. H. Harth, City Electrician; Robert Moorman, Jr., Supt. Fire Dept.
Florence—J. E. McKain.
Georgetown—Chief Fritz Young; Roy Young.
Newberry—Chief H. B. Wells.
Seneca—Chief J. E. Dillard.
Woodruff—Chief S. C. Westmoreland.

TENNESSEE

Bristol—Luther Jones, Fireman; Chief W. R. Collins.
Chattanooga—Chief Wm. Toomey; Misses Carolina Morton; Mary Francis Morton and Katherine O'Grady; Joe Brown, Master Mechanic.
Cleveland—Chief W. O. Horner; J. W. Hawk, Chairman Fire Committee.
Columbia—Chief W. P. Beard.
Covington—Chief Ed. Wall.
Dyersburg—Chief Barney C. Hunter.
Knoxville—Chief and Mrs. S. B. Boyd; Miss Julia Shattuck; J. R. Carnes, Master Mechanic.
Lenoir City—I. C. Roberts.
Lookout Mt.—Chief W. I. Stoner.
Lawrenceburg—Chief J. M. Davidson; Ed. Perkinson, Comr. Streets; Bob Hicks; H. B. Watkins, (Chrm. Safety & Finance); B. K. McClean, Supt. W. W.; Nick Gunselman.
Maryville—Chief and Mrs. Glen Huffstetler.
Missionary Ridge—H. L. Fisher.
Nashville—L. R. Ryman.
Rockwood—Chief J. L. Booth.
Signal Mt.—Chief Chas. A. Brown.

VIRGINIA

Bristol—C. A. Easterly, Secty; W. I. Balling, Furn.; Hugh R. Worley, 1st Engr.; O. L. Cross.
Norfolk—Chief R. S. Baughan; James Hatton, Master Mechanic.
Portsmouth—Chief R. A. Alexander; Chief R. A. Foster; Norfolk Navy Yards; J. W. Grant, Master Mechanic.

FROM OTHER STATES

Chief and Mrs. F. J. Roddy, Monroe, La.
Chief I. M. Evans, New Orleans, La.
Jos. H. Green, Eureka Fire Hose Co., New York.
Fred Fischer and A. R. Brown, American-LaFrance Co., New York.
Mr. Avery, Rensselaer Valve Company, Troy, N. Y.
Jay W. Stevens, San Francisco, Cal.
Mr. Schelling, Akron Brass Co., Akron, Ohio.
Walter Esterling, Columbus, Ohio.
Geo. O. Robinson, Concord, N. H.
C. R. Rinehart, New York City.

New Company in Service in Hartford

Company No. 16 went into service on Blue Hills Avenue in Hartford, Conn., taking the place of the famous Squad A division. The old unit was organized in 1910 with a Pope-Hartford truck. Under the single platoon system, eight men formed the squad and the number was later reduced to six when the two-platoon system went into effect in 1919.

Perhaps the most significant change with the passing of Squad A is the new system for covering the fire alarms. New assignment cards have been made applying to every company in the city. It provides for four alarms instead of three, and a general alarm as well.

A redivision of territory for the companies to cover has been made and several boxes have been dropped from their respective assignments. On first alarms under the new arrangement, three engine companies will respond with a hook and ladder company with two hook and ladder companies answering most of the boxes in the center of the city.

As succeeding alarms come in, companies not called to the fire will move in toward the center to vacant fire stations and even if a fourth alarm is sent in, there still will be three companies, in most cases, left to take care of other fires.

Chief Moran has tentative plans for stationing four or five pieces of spare apparatus, fully equipped and ready for service in fire stations around the center of the city. These can be called upon, fully manned, by summoning the platoon off duty as is the case sometimes when a second alarm is sent in. The general alarm will remain the final emergency call, short of summoning aid from outside the city.

Fire Losses in Ontario, Increased

According to figures made public by the fire marshal of Ontario, Canada there has been a general increase in the number of fires since January. During this period, there were 3,933 dwelling house fires with a total loss of $1,310,963 as against $1,164,524 for the same period the year previous. The loss in stores has been $1,633,983, barns burnt down, $414,322, and factories, $1,266,380.

LUMBER YARD FIRE IN LAUREL, MISS., GETS GOOD HEADWAY

Blaze Started from Hot Box in Saw Mill—Neighboring Communities Rush Aid—Mill Constructed of Wood Many Years Ago

STARTING from a hot box in the saw mill of the East Gardiner Lumber Co. yards in Laurel, Miss., fire spread to the entire plant, and the yard with its contents was reduced to a total loss.

The fire started near the large exhaust fan just as the men were about to leave after the day's work. The plant consisted of pine constructed buildings, one and two stories in height. Some of the buildings were thirty-five years old. There were partition walls and the yard had sprinkler protection.

The alarm came in at 3:30 p. m. The department soon had eleven paid firemen at the blaze to augment the mill's fire department. There were two pumpers and a city service truck in use. Aid was rushed from Hatties and Meridian, Miss.

Lumber Yard Fire Which Burnt for Over Three Days

About fifteen fire streams were used on the lumber yard fire. Water was supplied through a number of hydrants at one hundred pounds pressure.

The fire was finally stopped at the dry kilns after it had burned for three and one-half days. The plant was a total loss. The property loss on building and contents has been estimated at $500,000.

About one thousand men are now out of work as the result of the blaze. The East-Gardiner Lumber Company was one of the largest lumber companies in the country.

What's Burning?

(*Continued from page 645*)

NORTH EASTON, MASS.—Two barns on Langwater farm	25
BATHURST, N. B.—Barn of Gloucester Lumber Co.	125
CHICAGO, ILL.—Building of Kinsella Art Glass Co.	80
MARION, ILL.—Property of W. O. Potter heirs	25
ST. LOUIS, MO.—Third Baptist Church damaged	50
HOLSOPPLE, PA.—Springer Hardware store destroyed	25
CADOTT, WIS.—Dwelling of John Budah destroyed	25
WINCHESTER, OHIO.—Business property destroyed	65
BALTIMORE, MD.—Pier and warehouse near Turner's Station	30
MIDDLEBORO, MASS.—Barn of Lewis Gabrey	1300
LEWISTON, PA.—Store of J. Hurwitz, E. Market St.	25
PITTSVILLE, WIS.—Business section damaged	65
BURLINGTON, VT.—Plant of Frazier Baking Co.	25
UTICA, N. Y.—Palace Bowling Alleys and restaurant	25
HELENA, MONT.—Business section damaged	800
DINUBA, CAL.—Plant of Alta Packing Corp., near Monson	35
CHICKASHA, OKLA.—Oklahoma Improved Feed Co.	50
GLENDALE, ORE.—Business and residential property	200
PEORIA, ILL.—Bldg. of W. O. Ireland Shoe Co.	80
NEW BERN, N. C.—Mill of Neuse Lumber Co.	40
SYRACUSE, N. Y.—Crouse Apts., and F. H. Schneller bldg.	70
MEMPHIS, TENN.—Lee Valley Line wharf, several boats	80
GUILFORD, ME.—Skewer mill and adj. property	25
SAND LAKE, MICH.—Hotel destroyed	30
MADISONVILLE, KY.—Garrick Theatre damaged	70
TYLER, TEX.—Swann bldg.	70
BURLINGTON, IOWA.—Warehouse Northwestern Cabinet Co.	125

Riverton, N. J., May Have Fire House—Riverton, N. J., is considering plans whereby a new fire house will be erected.

June Losses Low in New England

Fire losses in New England for June are the lowest since 1914. Only 169 outbreaks of fire were reported where the estimated property loss reached or exceeded $10,000, and of these only seventeen were in the New England territory, the loss being reported as $790,000. This covers but five States, as Rhode Island had no fires in the $10,000 class. Connecticut, unfortunately, was the worst sufferer, fires in business blocks in Bristol, Norwalk and New Haven accounting for $275,000 of the $300,000 loss. The record in Massachusetts, including Boston, was kept within commendable bounds. Maine's total was swelled by a $125,000 hotel fire at Kennebunkport, and New Hampshire's only large blaze was the destruction of ice houses at Manchester with a loss of $100,000. Fires causing a loss of $10,000 or over in the New England States may be classified geographically as follows:

New England Aggregates

	Property Loss	No. of Fires
Massachusetts—		
Boston	$115,000	3
Other places	55,000	3
Totals	$170,000	6
Connecticut	300,000	4
Maine	145,000	3
New Hampshire	100,000	1
Vermont	75,000	3
Totals (June)	$790,000	17
New England Totals—		
May	1,768,000	31
April	2,171,000	36
March	1,201,000	36
February	11,196,000	47
January	2,755,000	50
Totals (six months)	$19,881,000	217

The very creditable result for June is largely attributed to favorable weather conditions throughout the entire continent, the absence of excessive moral hazard and the deterrent effect of recent important criminal action against those seeking to gain by incendiary operations. The June fire losses of $11,123,000 are 57 per cent less than the losses charged against June last year. Fire underwriters are keenly hopeful that the improved situation may be maintained for the balance of the year and thereby overcome the expected loss by reason of shrinkage in the value of securities held by the companies.

Moline, Ill. to Buy Community Truck—A committee has been appointed in Moline, Ill., to purchase a community fire apparatus.

Bedding and Trucks Destroyed in Warehouse Fire

For fourteen hours, firemen of the Philadelphia Fire Department under acting Chief Jacob Walbert, fought a fire in the three-story furniture warehouse of Stern & Co. Six alarms were turned in and brought out twenty-five pumpers, seven truck companies, one high pressure company, one rescue squad and one water tower company. The building was one hundred by three hundred feet, constructed of brick, minus any sprinkler protection. When the firemen arrived, the entire north end of the building was involved. There was forty-five pounds pressure on the ordinary hydrants and from 175–200 pounds on the high pressure hydrants, supplied by direct pumping. The building contained furniture, bedding and motor trucks.

FIRE DEPARTMENT ACTIVITIES

Wadick, N. J., to Buy Apparatus—Wadick, N. J., is planning to buy new fire apparatus.

Quincy, Ill., Needs Ladders—Chief Yates, of Quincy, Ill., has stated that the department needs ladder equipment at once.

South Bend, Ind., to Buy Chemicals—Bids have been received in South Bend, Ind., to supply chemical apparatus.

Bandon, Ore., Wants Pumper—Bandon, Ore., is planning to purchase a 500-gallon pumper equipped with a booster tank.

Keeseville, N. Y., Receives Pumper—A Graham triple combination pumper has been delivered to Keeseville, N. Y.

Woonsocket, R. I., May Buy Pumper—Woonsocket, R. I., is considering the purchase of a $13,000 pumper.

Vermilion, Pa., to Buy Apparatus—Vermilion, Pa., will soon purchase a pumper equipped with chemical tanks.

Storm Lake, Ia., Firemen to Picnic—The annual picnic of the Storm Lake, Ia., fire department will be held on August 21.

Augusta, Ga., to Expand Fire Alarm—Plans are being made for the expansion of the fire alarm system in Augusta, Ga.

More Pumpers for Houston, Tex.—Two 750-gallon pumpers will be placed in service at Houston, Tex., before the end of the year.

Murphy Chief at Whitney Point, N. Y.—Loren K. Murphy was elected chief of the Whitney Point, N. Y., fire department.

Bucyrus, O., to Buy Pumper—Plans are under way in Bucyrus, Ohio for the purchase of another pumper estimated to cost $13,000.

New Stations for Philadelphia—Plans are being made in Philadelphia, Pa., to locate four new fire companies in recently developed outlying sections.

Reading, Pa., Celebrates—Reading Hose No. 1 of Reading, Pa., celebrated its 109th birthday. It is the third oldest company in the department.

Upland, Cal., May Buy Apparatus—Upland, Cal., is considering the purchase of fire apparatus. The matter had previously been delayed.

Ferndale, Wash., to Have Rural Car—Funds are being raised for the purchase of a chemical car for protection to rural sections about Ferndale, Wash.

New Pumper in Service in Utica, N. Y.—A 1,000-gallon pumper has been placed in service in Utica, N. Y. It is equipped with a forty-gallon chemical tank.

Suffolk, Va., Has New Fire House—Construction of the new fire station in Suffolk, Va., is almost completed. The station will house a pumper and a 75-foot ladder truck.

Missoula, Mont., Needs Equipment—Chief J. T. Cranney of Missoula, Mont., made a number of recommendations to the city council. He asked for a service truck and pumper, and the purchase of considerable equipment.

Ocean City, N. J., to Have New House—Plans have been approved for a new fire station to be erected in Ocean City, N. J. The sum of $50,000 has been appropriated for this building.

Pleasantville, N. J., May Have New House—The council of Pleasantville, N. J., is considering an ordinance to erect a new fire station. The measure has already been passed at two readings.

Chief Kenlon Off for Europe—Chief and Mrs. Kenlon and Dr. and Mrs. Archer, of New York City, left on Friday, July 20, on the Scythia for a European trip. They will be gone until September 29.

Le Mars, Ia., Has New Apparatus—A Nott triple combination apparatus has been ordered by Le Mars, Ia. A one piece windshield will be placed on the machine for the protection of the driver.

Yonkers, N. Y., Will Purchase Equipment—The Board of Estimate at Yonkers, N. Y., is considering a $12,500 appropriation for purchase of equipment for the new fire headquarters building.

Portageville, N. Y., Forms Department—A fire department has been organized by the business men of Portageville, N. Y. Funds are being raised to finance the new organization.

W. Collingswood, N. J., Opens Addition—The addition to the fire house in West Collingswood, N. J., containing bowling alleys, recreation, meeting and entertainment rooms, has been opened on July 13.

York, Pa., to Dedicate Firemen's Monument—Firemen in York, Pa., plan to dedicate a firemen's memorial on Labor Day. The monument is to honor the memory of the firemen who lost their lives while serving the fire department.

Department Organized in Citrus Section—Various citrus packing houses in La Habra, Cal. have agreed to furnish and equip ten men for fire fighting. These men will be trained by the County Forest Protective Association. Other men may be drafted in case of a serious fire.

Former N. Y. Deputy Commissioner Dead—William F. Thompson, formerly deputy fire commissioner of New York City in charge of Brooklyn and Queens boroughs, died at his home in Brooklyn at the age of sixty-seven. He was a bachelor and lived with his brother and sister.

Dog Sets Fire to House—The usual practice is for a dog to prevent a house from being totally destroyed by fire. In this case, a dog at Ausable Forks, N. Y., overturned a cigar lighter and started a fire. The resident was aroused by the smell of smoke, and the blaze was extinguished before much damage was done.

Ex-Chief of Derby, Conn., Killed—Joseph Pequinot, chief of fire department at Derby, Conn., fifteen years ago, was killed by a train as he was walking over a railroad trestle. He was a factory night watchman and it was his custom for the past fifteen years to use the trestle as a pathway to and from his work. He is survived by his widow and three sons.

Hotel Sued for Lives Lost in Fire—Suit was brought against the owners of the Old Weskora Hotel, destroyed by fire last winter in Ossining, N. Y. Three lives were lost at that time. One man has started suit for $100,000 damages for his wife's death. He alleges negligence as there were no fire escapes in the building.

Two New Stations for Racine, Wis.—Racine, Wis., has started proceedings to acquire two sites on which will be erected two new fire stations. At present the city has six fire stations; a new bungalow station was erected two years ago on the north side. The proposed buildings will be designed to harmonize with the buildings in the immediate section.

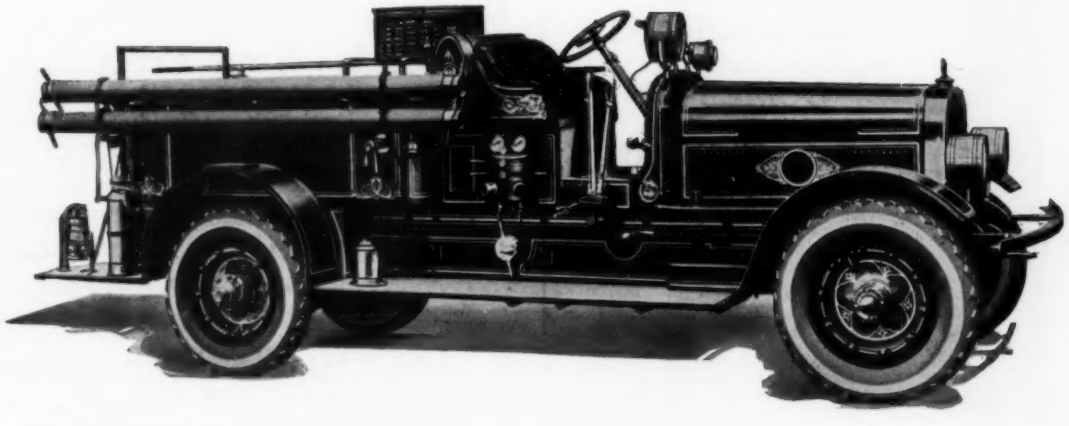
Ambulances to be Operated by Chicago—A bill has been approved by Mayor Thompson of Chicago for the purchase of six ambulances to be operated under the direction of the fire department. The bill also considers the additional fire department personnel necessary by the construction of new fire stations in the city.

New York City to Add Eighty Firemen—Eighty additional firemen will be added to the fire force of New York City. Commissioner Dorman has promoted eight firemen to the rank of lieutenant. There are twenty vacancies for captain in the department but there is no available list. An examination for promotion to captain was held some time in January, but the results of the tests have not yet been announced.

False Alarms High in the Bronx—For the first six months of this year, twenty-two per cent of the calls in Bronx Borough, New York City, were false alarms. During June, the heaviest month of that period, the percentage rose to thirty-five. The new spade-handle fire alarm box with its single door is believed to be an invitation for mischievous children. Most of the trouble is caused on Saturday night.

Firemen Rescue Three Kittens—A defective gasket in an ammonia compressor line forced fumes into the basement of a cheese factory in New York City, and endangered the lives of some workmen. Fumes filled the basement and seeped through to the first floor. An electric fan was started, and the basement soon cleared of the fumes. In a corner was found three kittens, which, when taken to the street, were soon revived. Thousands of dollars worth of cheese was saved.

Firemen and Council Disagree—Apollo, Pa., has a case in court and friction from their firemen as the result of a fire apparatus purchase. Some time ago, firemen ordered a $13,000 fire truck expecting to pay for it with $5,000 voted by the people, and to raise the rest by popular subscription. When the machine arrived, the town officials refused to accept it, saying that a cheaper machine would serve the community as well. Firemen then brought the case to court on the grounds that the move to purchase cheaper apparatus is illegal. The case is now in the courts.



Putting staunch construction under the red paint is a man's-size job - -

The polished sheen of metal and the brilliance of paint do not tell the quality and sturdiness of fire apparatus.

Putting staunch construction under this dazzling exterior is a man's-size job. Seagrave is equal to the task.

Engineering skill, experience, tireless effort and modern machinery combine to afford reliable protection for the hundreds of cities throughout the country that depend solely upon Seagrave apparatus.

This thoroughness of engineering and manufacturing methods is the secret of Seagrave's supremacy in the fire-protection field.

The SEAGRAVE Corporation

COLUMBUS, OHIO

BRANCH OFFICES AT:

Boston, Mass.
New Haven, Conn.
Philadelphia, Pa.
Chicago, Ill.
Dallas, Texas
Seattle, Wash.
Birmingham, Ala.
Kansas City, Mo.
Pittsburgh, Pa.
Los Angeles, Cal.
San Francisco, Cal.

MATHEWS
(Reg. U. S. Pat. Off.)
FIRE HYDRANTS
for
DOMESTIC
and
HIGH PRESSURE
Service

NOTE—

The positive waste value.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grade.

VALVES and BOXES
CAST IRON PIPE
(Sand-Cast or "Sand-Spun")
FITTINGS

R. D. WOOD & CO., Phila., Pa.

Tell Us Your Protection Problems!

Our Engineers are at your service and will gladly recommend the right design of VAC-M Arrester to assure you uninterrupted service.

THE NATIONAL ELECTRIC SPECIALTY COMPANY
Sole Makers, VAC-M ARRESTERS
TOLEDO . . . . OHIO

JACOB REED'S SONS
Founded 1824 by Jacob Reed

FIREMEN'S UNIFORMS

Thoroughly tailored of especially selected fabrics. Uniforms that look well, wear well and that will give entirely satisfactory service.

Reed's Uniforms are most economical because they represent full value for the amount expended.

Write for catalog and prices.

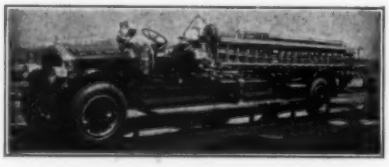
1424-1426 Chestnut St., Philadelphia, Pa.

BRAXMAR
BADGES

have been the recognized standard for fire departments for almost 50 years. Used everywhere. More than 900 designs. Send for illustrated catalog and prices.

C. G. BRAXMAR CO.
242 W. 55th St., N. Y. C.

MAXIM FIRE APPARATUS



If your apparatus is Maxim-built it will prove dependable and reliable at all times.

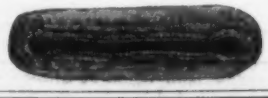
Complete information upon request.

MAXIM MOTOR COMPANY, Middleboro, Mass.
Metropolitan Sales Agents:
The Woodhouse Manufacturing Co., 156 Chambers St., N. Y.

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.

230 West Randolph St.,
Chicago, Ill.



If you purchase BI-LATERAL FIRE HOSE it will increase the value of your hose-carrying apparatus more than the cost of the load of Bi-Lateral Fire Hose.

We can load from 25% to 33% more and when coupled with rocker lug couplings the Bi-Lateral hose makes an apparatus one to be proud of and as near perfect as possible to do quick and efficient service.

PROPOSED IMPROVEMENTS

Saratoga Springs, Saratoga Co., N. Y.—The Fire Improvement Committee recommended the construction of a new fire station in Congress Park. (Previously mentioned June 15.)

Willard, Huron Co., Ohio.—City Council contemplating erection of fire station.

Geneva, Ashtabula Co., Ohio.—Authorization of $9,000 in bonds was given by City Council for the purchase of new piece of fire apparatus. Bids to be invited shortly. (Previously mentioned May 29th.)

Hollister, San Benito Co., Cal.—City Council discussing purchase of an additional piece of apparatus for the fire department.

Wiota, Cass Co., Ia.—Town Council raising funds for the purchase of a community fire truck, according to reports.

Bids for Motor Apparatus, Hose and Siren

FLOSSMOOR, ILLINOIS

Bids received until August 6, 1928.

Sealed Bids will be received for the following items:

1. Triple combination pumper, 500 gallons capacity, equipped with 40 gallon Foam type chemical tank and hose, as per specifications on file with the Village Clerk.
2. 1500 feet of 2½ inch hose with couplings, as per Underwriters Laboratory Specifications.
3. One (1) Fire Alarm Siren, Double Head Type. Bids to be in hands of Village Clerk at Flossmoor, Illinois on or before August 6th, 1928.

7-25

C. J. Huston,
Flossmoor, Ill.

Fire Inspector Position Wanted

Young married man with five years rating experience, wishes connection as a Fire Prevention Inspector. No preference as to state. Best references furnished. Address: Box 154, % Fire Engineering, 225 W. 34th Street, New York City.

7-25

For Sale Fire Apparatus

4 cylinder, American LaFrance combination Hose Car and Chemical, 6 years old, in excellent condition. The reason for wanting to dispose of the above apparatus is because we are standardizing on Triple combination Pumpers and Hose Cars. Apply: Chief John C. Stahlhut, Fort Wayne, Indiana.

7-25, 8-8, 22.

CONVENTION DATES

July 24-27—DOMINION ASSOCIATION OF FIRE CHIEFS. 20th Annual Convention, Kingston, Ont. Secretary, Chief James Armstrong, Kingston.

July 25—ROCKLAND COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. 15th Annual Convention and Parade, Haverstraw, N. Y.

July 26-28—MONTANA STATE FIREMEN'S ASSOCIATION. 37th Annual Convention, Livingston, Mont. Secretary, D. E. Moser, Bozeman, Mont.

July 27-28—NEW MEXICO STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Socarro, N. M. Secretary, Theodore A. Rosenwald, East Las Vegas, N. M.

July 31-Aug. 2—WESTERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Twenty-ninth Annual Convention, Depew, N. Y. Secretary, Henry A. Clark, Batavia, N. Y.

Aug. 1-2—CENTRAL DISTRICT VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Clearfield, Pa. Secretary, John E. Johnson, DuBois, Pa.

Aug. 4—ERIE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Convention, Corry, Pa.

Aug. 6-8—UTAH STATE FIREMEN'S ASSOCIATION. 21st Annual Convention, Bingham Canyon, Utah. Secretary, Harris E. Anderson, Fire Headquarters, Salt Lake City, Utah.

Aug. 13-17—NORTHWEST FIRE SCHOOL. Sessions at Minneapolis, Minn.

Aug. 14—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 27th Annual Convention, Hanover, Pa. Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 14-15—WYOMING COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Castile, N. Y.

Aug. 14-16—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 44th Annual Convention, Dorscht Hall, 270 Crown St., New Haven, Conn. Secretary, D. W. Harford, South Norwalk, Conn.

Aug. 14-16—WISCONSIN PAID FIREMEN'S ASSOCIATION. 21st Annual Convention, Racine, Wis. Secretary, Hugh Corcoran, Superior, Wis.

Aug. 20-21—NEW YORK STATE PERMANENT FIREMEN'S ASSOCIATION. 9th Annual Convention, Seneca Falls, N. Y. Secretary, F. A. Emden, Eng. Co. No. 4, Utica, N. Y.

Aug. 22-24—VIRGINIA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Ocean View, Va. Secretary, Chief J. B. Gordon, Newport News, Va.

Aug. 28—MICHIGAN STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Fordson, Mich. Secretary, George F. Dansbury, Grosse Pointe Farms, Mich.

Aug. 29-31—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 6th Annual Convention. Reading, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

Aug. 29-31—INDIANA FIRE CHIEFS' ASSOCIATION. Annual Convention, Fort Wayne, Ind. Secretary, Chief Ezra D. Owens, Fire Department, Bedford, Ind.

Sept. 4—NEW HAMPSHIRE STATE FIREMEN'S ASSOCIATION. 31st Annual Convention, Colebrook, N. H. Secretary, Oscar P. Stone, 312 Manchester St., Manchester, N. H.

Sept. 5-6—COLORADO STATE FIREMEN'S ASSOCIATION. 12th Annual Convention and Tournament, Rocky Ford, Col. Secretary, Clinton Turnbull, 303 Jacobson Bldg., Denver, Col.

Sept. 11-13—ILLINOIS FIREMEN'S ASSOCIATION. 41st Annual Convention, LaSalle, Ill. Secretary, Roy W. Alsip, Asst. Chief, Fire Department, Champaign, Ind.

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, Ia.

Sept. 18-20—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Hotel Nichols, Haverhill, Mass. Secretary, Daniel J. Looney, 1043 Old South Bldg., Boston, Mass.

Sept. 21-22—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 51st Annual Convention, Atlantic City, N. J. Secretary, William Exall, Chamber of Commerce Bldg., Newark, N. J.

Sept. 21—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Annual Meeting in evening, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 1-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen, Sacramento, Cal. Secretary, State Fire Marshal Jay C. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 9-10—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Ray Tiller, Warterloo, Ia.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual Meeting, place to be selected later by Executive Committee. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Oct. 11-12—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Frank C. McAuliffe, Chief of Patrols, 100 Desplaines St., Chicago, Ill.

Oct. 15-17—EASTERN ASSOCIATION OF FIRE CHIEFS. (Eastern Division, I. A. F. C.) First Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. (Just preceding I. A. F. C. Convention.) Secretary, T. Howell Johnson, Newark, N. J.

Oct. 17-20—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. Exhibits at Second Regiment Armory. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibits, Chief August Gerstung, Elizabeth, N. J.

Oct. 22-24—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Eastern Fire Alarm Superintendents Meet

M. F. Orrell, superintendent of fire and police telegraph, Worcester, Mass., was elected president of the Eastern Association of Superintendents of Fire and Police Telegraph, at the annual meeting which was held at the New Ocean House in Swampscott, Mass., on June 20 and 21.

A. E. Cook, Superintendent of fire alarm, Meriden, Conn., was elected first vice-president; and George H. Bowen, superintendent of the Boston Automatic Fire Alarm Company, was elected second vice-president. Mr. Bowen was also re-elected as secretary-treasurer.

The Gamewell Company, of Newton Upper Falls, Mass., exhibited the new Gamewell four number transmitter of succession and non-interfering type; a new succession fire alarm box with bakelite inside case and glass container for movement; a new Bakelite terminal base equipped with lightning arrester; and a Neon gas street light for fire alarm boxes.

The speakers at the two-day meeting were as follows: address and demonstration by John A. Terrell, electrical engineer of the Connecticut Telephone and Electric Company, on "The Adaptation of Neon Light for Fire Alarm Use"; address of welcome by Dr. Howard K. Glidden, chairman of the Board of Selectmen, Swampscott; talk by B. A. Cooper, sales manager of the Mead Morrison Mfg. Co., on "Cable Pulling Apparatus"; address by A. E. Bergeron, of the Electric Time Co., of Boston, on "The Telechron Electric Clock"; address by James A. Vahey, of the Edison Electric Illuminating Co., of Boston, on "The Modern Trend in Power Systems"; demonstration of the "Brach Unifone" by representative of the L. S. Brach Mfg. Corp., Newark, N. J.; address by District Chief E. W. Williams, Lynn, Mass.; and talk by James A. Cook, superintendent of the electrical department of the Lynn Gas and Electric Co., on "The Relation of Utility Companies to Municipal Fire Alarm Systems".

H. BELKNAP.

District Organization to be Formed in Taft

The West Side Fire Fighters' Association consisting of fire departments of the Midway-Sunset fields will be formed in Taft, Cal. Membership will consist of fire companies in Taft, South Taft, Ford City, Maricopa, Fellows and McKittrick and will have as its object the promotion and protection of firemanic interests.

Captain Myers of Los Angeles, Cal., president of the California State Firemen's Association was present at the organization meeting.

Albany, Ill., Receives New Apparatus—A Boyer apparatus mounted on a Reo chassis has been delivered to Albany, Ill.

Magirus Truck Delivered to Milwaukee—A Magirus aerial ladder truck has just been delivered to Milwaukee, Wis., from the factory in Germany.

FALSE ALARMS

A drill instructor who was very fond of animals was giving individual lessons to a rookie who appeared to be some-

what backward at the fire department school.

"Now remember, son," he said during ladder work, "you must always watch the dogs."

The rookie seemed puzzled for a moment.

"Pardon me sir, but do they bite."

PROPERLY DIRECTED

A stranger in town who was suffering from a cinder in his eye, was walking by the fire station. He stopped in the doorway and asked:

"Can you tell me the way to an emergency hospital?"

Just then an alarm came in and the gong sounded.

"Just stand where you are now," replied the desk man, "you'll get there in a hurry."

THE WRONG ROAD

McGillins selected June as the month to be married. Everything was arranged; he had his two weeks' leave, members of Truck 7 company were to be present, so was the captain, and even the battalion chief. His lieutenant was best man, and a large crowd in uniform was invited to see that things were done properly. And they did.

Poor McGillins had barely time to grab his bride, his valise, his ticket and rush to the railroad station before the buffoonery started. He rushed into the railroad station and in his haste to board the train, offered his marriage license instead of his railroad ticket.

The official studied it for a while and then said:

"My boy, you've got a ticket for a long, wearisome journey, but not on this road."

CHEERS FOR THE U. S.

Some tourists, typically American, were looking at the boiling crater of Mt. Vesuvius. Their guide who could speak English fairly well said:

"You haven't anything like that in America, have you?"

Without a moment's hesitation, one tourist replied:

"No, we haven't, but we've got the Niagara Falls that would put that damn thing out in five minutes."

A RANGER'S PRAYER

God, help the folks who walk these trails
Be mindful as they go
That there shall be no embers left
To tempt the winds that blow.
Nor let them leave old tins about
Their camp, nor bits of glass,
For forest fires start with these
Half hidden in dry grass.

This stream that runs its pebbled way,
God, let them leave it sweet
And pure as when they found it first
Hidden from Summer's heat.
And do not let them cut the trees
That stand in majesty,
Nor let them trample ferns, nor break
The branch of any tree.

God, keep my vision true and clear
Through all this bluish haze
That hangs like velvet everywhere
Through these long Summer days.
Nor let me see a wisp of smoke
Curl up where forests dwell,
But if I do—God, give me strength
To do my duty well.

—CRISTEL HASTINGS

It's a sure sign of summer when a Scotchman throws his Christmas tree away.

PROPERLY EQUIPPED

Along the Pacific Coast cities, the Chinamen are used to perform various domestic duties. At Station 12 the men tired of preparing their own meals so they contributed a small amount each week to pay the wages of a Chinese cook. An out-of-town chief was greatly interested in the plan and inquired of the captain:

"Does your Chinese cook speak good English?"

"No," replied the captain, "he just speaks broken China."

QUICKLY RELIEVED

Two months prior to the department's annual parade, most of the men were told to visit a certain tailoring shop to be measured for new uniforms.

As Olsen was being measured for his new blue serge uniform, the tailor observed something.

"There's a sort of a bump on your chest, but we make uniforms so that you will not realize the bump is there."

"I know you will," sighed Olsen, that's my pocketbook in my inside pocket."

Four out of five have it and the fifth one sells it.

JUST PLAIN TALK

Chief McTigue was a very happy man. The new bungalow station erected in the city for $25,000 was open for public inspection. He was showing a number of his friends through the cozy station when the telephone rang.

"Pardon me," he said, "but make yourselves perfectly at home. I am at home myself and wish you all were."

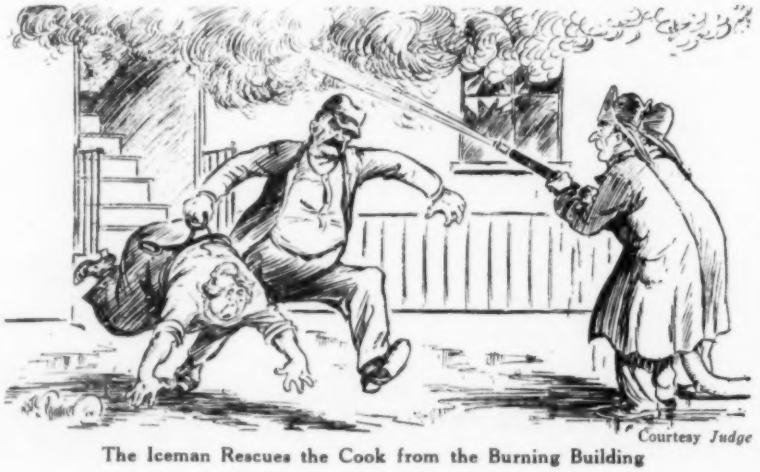
THERE WAS EVIDENCE

The morning of the Fourth of July was a hot one. The madam of the house was in the porch swing with a newspaper in her hand.

"Is it true," she inquired of her husband, "that the chief of the fire department could not prevent the sale of fireworks?"

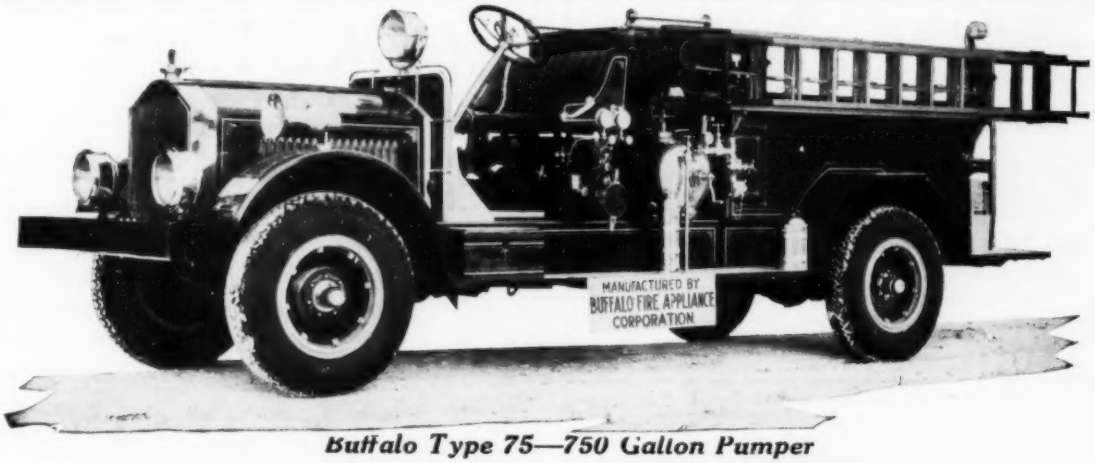
Just then there was a bang from a salute set off by a youngster.

"Yes, dear," he replied, "I hear reports to that effect."



Courtesy *Judge*

The Iceman Rescues the Cook from the Burning Building



Buffalo Type 75—750 Gallon Pumper

The above 750 Gallon Triple Combination Chemical and Hose Car is in service at the United States Veterans' Hospital which is located at Northport, L. I., and is safeguarding the lives of many of our boys who served in the World War against the world's greatest hazard, which is FIRE.

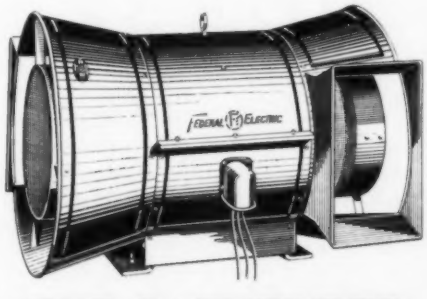
IF YOU WANT SOMETHING BETTER, BUY *"BUFFALO"*
U. S. GOVERNMENT BUYS THE BEST, WHY DON'T YOU?

Write for detailed specifications

BUFFALO FIRE APPLIANCE CORP.

44 CENTRAL AVE. **BUFFALO, N. Y.**

Manufacturers of all types of Fire Apparatus



THE PATHFINDER

An alarm is turned in—the Federal automatic system has it coded. The signal blasts out, and the Fire engine is on its way. Firemen need not stop—they know where to go, for the coded Federal is directing them accurately. Federals, because of their accuracy and clear bellowing tone, are known as "Pathfinders." Plus all this, Federals are constructed of less parts and are more simple than any other alarm system built. New call boxes or stations are added at very little cost—simply by connecting two wires. Hundreds of towns seeking full fire protection have installed Federals.
Write now for complete information, specifications, estimates, or all. It's too important to put off. Write now!

POINTS OF COMPARISON

1. Both horns are entirely screened. This prevents the entry of rubbish and the nesting of birds in the horns.
2. Armco Galvanized Iron — the best that can be obtained anywhere — is used for the covering.
3. Winged nuts and hinged cover make the motor easily accessible.
4. General Electric or Wagner motors — the finest motors made — are used in the Federal.
5. Bright red Duco finish gives the siren a handsome, durable appearance.
6. Pressed steel — not cast iron — is used for the base.
7. The air guard may be adjusted to direct the sound in any direction — a patented feature found on no other make of siren.
8. Fifteen-inch, cast aluminum rotors.
9. Eye-bolt for hoisting.

FEDERAL ELECTRIC COMPANY
8700 South State Street, Chicago, Illinois.

Do they hear *You* Coming?

You can MAKE THEM HEAR you by using the same type of signal that is being used by the Locomotive. And why not? For 75 years the great American Railroads have been using WHISTLES to attract attention to an approaching train. If more effective warning signals existed, the railroads would be using them today—for they are spending millions annually to prevent the **DESTRUCTION of LIFE and PROPERTY.** Our Engineering Department has now made it possible for Fire Apparatus to also enjoy the protection of

BUCKEYE WHISTLES

A Warning Signal that Warns

BUCKEYE IRON & BRASS WORKS - DAYTON, OHIO

Eastman Improved Platforms and Holders

Write for Catalogue

are indispensable where high pressure service is required. With Eastman equipment any size streams can be easily handled by one man.

Eastman Nozzles and Deluge Sets

are designed by engineers who for over thirty years have specialized in equipment for producing fire-fighting streams that are unsurpassed for solidarity, distance and effectiveness.

Samuel Eastman Co.,
Concord, N. H.

COREY

Hydrants as manufactured by "Rensselaer" are being used to fight fire in every State of the Union. Made of the very best material and workmanship.

"The Rolls-Royce among Fire Hydrants"

RENSSELAER VALVE CO.,
TROY, N. Y.

HALE PUMPS

LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

HALE FIRE PUMP CO.
Conshohocken, Pa.

Saves time - *and costly hose*

No. 1 (Capacity 3 to 7 tons, weight each 72 lbs.)

No. 2 (Capacity 3 to 12 tons, weight each 118 lbs.)

Complete Information of Prices on request

It's often necessary to move apparatus at a fire. Automobile traffic hates to be held up by a line of hose stretched across the right of way.

Why ruin your hose by driving over it? Or waste valuable time cutting off and disconnecting?

The Wausau Protector is a big time and money saver—easy to handle and carry. Order a set today, or write us for particulars.

Wausau Fire Hose Protector Co.
1520 Harmon Place, Minneapolis, Minn.

JOHN H. CLAY, INC.

1320 Ridge Ave., Philadelphia, Pa.
Established 1864

DOOR SPRINGS

Complete Automatic Spring Outfits for Doors Opening In and Out. Used throughout the world. Once on the doors your door opening troubles cease. They last a lifetime. Send for Bulletins.

MORSE

FIRE BOAT EQUIPMENT

Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

Andrew J. Morse & Son, Inc.
221 High St. Established 1837 **Boston, Mass.**

Novo Acid Jars & Holders

of every description, stronger than lead and non-corrosive. Used by departments throughout the country.

Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks

Lally Improved Fire Hose Couplings, Fire Extinguishers and Charges, Fire Hose and Fire Department Supplies in General

Send for Complete Catalog

LALLY FIRE APPLIANCE CO.
Wilmington Brass Co., Wilmington, Del.

When in the Market for New Equipment

please write us and we shall be glad to have the right manufacturers provide you with complete specifications and prices for your consideration. This service won't cost a cent nor place you under any obligation whatever. We just want to cooperate both with you and with manufacturers in every possible way.

FIRE ENGINEERING
225 W. 34th St., N. Y. C.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

WHAT IS THE REAL TEST OF MOTOR FIRE APPARATUS?

Freak Tests Are of Little Importance in Determining Comparative Worth of Apparatus—Machines Should Be Tested for Real Service

"WILL she squirt over the top of the city hall tower?"

Salesmen who sell motorized fire apparatus have heard that statement so often in trying to close sales with volunteer fire department officials that they are somewhat disappointed if the subject is not brought up.

The pumper is connected to a hydrant, a nozzle is attached to the hose line and a stream of water is squirted well over the tower in question. All are satisfied. The local newspaper plays up the incident in a prominent part of the paper, the city officials are pleased, and the residents who watched the test are convinced that if ever there is a fire in that community, the new pumper is more than capable of delivering water to the highest building.

But they are wrong. Such demonstrations are no proof of worth in fire apparatus. There are always tricks that may be employed in staging such demonstrations so that, to the layman, the exhibition is considered remarkable.

Pumper Assisted by Hydrant

When the pumper is connected to the hydrant, the machine is relieved of a great share of its work. Instead of lifting its own water, the water is being supplied at an appreciable pressure. Let us say, for purposes of illustration, that in order to deliver the water at the desired point with a certain hose layout, it is necessary that the pump develop 150 pounds pressure. Now if the hydrant supplies water to the machine at thirty pounds pressure, the pumper must only develop 120 pounds pressure. In addition, a large portion of the power is conserved since it is not drafting its own water.

There is a common way, frequently employed at tests, by which pressure may be built up. In tests where it is necessary to deliver water at a high elevation, it is necessary to have a high pressure. This is done by placing a small tip on the playpipe. Of course, such practice cuts down the amount of water delivered. But who is interested in volume when the object is to wet down a certain tower?

A Hot Fire Requires Water

Volume is a decided factor in testing apparatus. It forms an important differentiation between say a 500-gallon pumper and a 750-gallon unit. Therefore, as long as volume of water is purchased, the test should show if the unit is capable of fulfilling its contract. The chances are that although water was delivered well over the specified elevation, not enough went over the top to do much good in case of a real fire. At a good, hot fire, water is necessary to reduce the substances to a point below that of ignition. If only a small amount of water is delivered, the liquid is vaporized into steam and it is not very effective in lowering the temperature of the burning substances. At a severe fire only water in large quantities will prove of value.

Again, spectacular tests mean nothing. Once a chief said:

"We had this 500-gallon pumper down to the creek yesterday and she threw 625 gallons of water."

Truely, such an exhibition is remarkable, and should indicate a large power reserve in the pumper. But upon analysis, there is nothing in the results obtained that places the unit apart from other machines. The test did not last longer than five minutes, or the time required to build up the pressure to deliver that amount of water.

In fire department work, it is performance that counts. There is a great difference in having an automobile travel sixty miles an hour for five minutes and in having one travel sixty miles an hour for an hour. Short spurts of intensive work are not convincing in fire department routine. Rarely is a fire, when once under way, extinguished in five minutes. It requires hours of hard, gruelling work before the battle is won. It is necessary for the machine to be built well in order that it accomplish its work for a long period of time. As a contrast to this five-minute exhibition, it is not uncommon to read about pumpers that performed fifty or more hours in an emergency. That is the real test, but of course, for sales or buying purposes, it is not practicable.

If the machine is not supposed to "squirt" water over a high steeple or to test from a hydrant or exhibit intensive pumping, then what is it supposed to do?

It should be made to duplicate, as near as possible actual conditions of fire and to carry out its contract.

Standard Pumper Contracts

Most pumpers are sold today on a standard contract basis. It must deliver its contracted capacity at 120 pounds pressure for two hours, half of its rated capacity at 200 pounds pressure for one-half hour and one-third of its rated capacity at 250 pounds pressure for one-half hour. Such a test is more commonly known as the Underwriters' test. New machines are always subjected to such tests by insurance inspection bureaus before the units are considered acceptable.

The stipulated pressure of 120 pounds is just an arbitrary one that has been arrived at after many years of experience with early forms of steamers and motorized apparatus. It has been felt that if there are any mechanical defects in the machine, in all probability, they will cause trouble within the stated two hour period. The pressure tests are further designed to test the pump, and in the very small units such as 300 or 350-gallon pumpers, the 250-pound test is often omitted. These tests show up the reserve power of the machine, if any, the volume of water that can be delivered, and so forth.

It is a business-like test divorced from all frills. Operating men know the grind through which the pumps must go through and seldom, if ever, do they try to deliver amounts of water well over that stipulated in the contract. It is mechanical tests such as the ones described that prove the real worth of a pumper unit—no concessions are granted, and the unit must prove itself worthy of fire department service.

Some chiefs watch out for undue vibration in machines. Unless one has had experience with pumpers,

it is difficult to say when the vibration of a pumper becomes excessive. The vibration resulting from a piston-type pump will always be greater than that developed by a rotary pump. But that is neither alarming nor a discredit to the piston-type model.

There have been tests where the vibration has been so excessive that the hose would writhe about like a serpent. Such results clearly indicate faulty machine design.

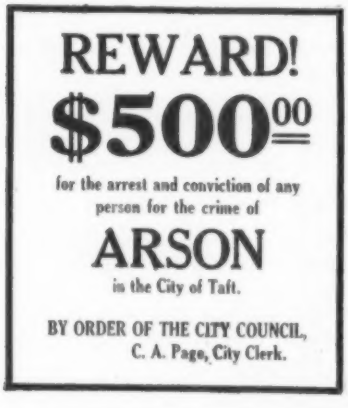
Apparatus must be well finished. It is not the nickel-plated parts or the red paint that make a truck a fire department unit. It must be built for hard service. The machine should be well assembled, and the frame well braced to carry the large loads necessary.

While the major portion of this article deals with pumpers, similar care must be exercised when purchasing chemical cars, ladder trucks, and other apparatus. The buyer should see that attention has been made to the many refinements in fire apparatus design that are made necessary by virtue of the service the unit is expected to give. Materials used in construction should be of the best, as the apparatus will be operated for many years to come.

When next you consider the worth of fire department apparatus, remember that the spectacular or five-minute tests are of little importance in forming an opinion.

Plan Used to End Arson Trouble

There is scarcely a community or municipality that has not been troubled some time or other by the activities of a fire-bug. Taft, Cal., has devised a plan to end some of the arson troubles by offering a reward.


REWARD!
$500.00
for the arrest and conviction of any person for the crime of
ARSON
in the City of Taft.
BY ORDER OF THE CITY COUNCIL,
C. A. Page, City Clerk.

Signs have been posted about the municipality offering five hundred dollars for the arrest and conviction of any person who committed arson in the city of Taft, Cal.

The reward has been made large enough to attract persons to try to claim it. Too many suspects have been brought to court charged with arson and later released because of insufficient evidence, although the chief and others interested in the case are sure that arson has been committed. It requires conclusive proof in court to have one suspected of such a charge declared guilty.

City officials of Taft believe that the sign will do one of two things. It will either scare away those who plan to set fire to buildings to defraud the insurance companies, or it will prompt the residents to try to collect sufficient evidence for convicting the suspect.

The experiment started in Taft is worthy of watching by other chiefs.

Tama, Ia., Buys Apparatus—Tama, Ia., has purchased a 600-gallon Nott pumper which will be delivered the latter part of August.

Slater, Ia., Farmers Buy Community Shares—Farmers near Slater, Ia., purchased shares in the Community Fire Protection Plan which was formed to furnish rural protection. The money obtained was used to purchase fire apparatus.

Contract Awarded for Milford, Conn., Station—Contracts have been awarded for the construction of a headquarters station in Milford, Conn., ground for which has been broken. It is estimated that the building will cost $150,000.

Mayor "Bossy" Gillis to Close Many Houses—Mayor "Bossy" Gillis of Newburyport, Mass., intends to close up all fire stations with the exception of the central building. He also recommended the purchase of another pumper and a small chemical car to be used for answering still alarms.

Junior Department Formed in Long Beach

Boys between the ages of fifteen and eighteen years have been formed into a junior fire department by Chief W. S. Minter of Long Beach, Cal. The Chief is personally supervising the selection, training and development of the boys from whose ranks, it is believed, will come a large number of future fire officers. Meetings are held each Tuesday evening at the Central Fire Station and they last about one hour.

"Many of the larger eastern cities are devoting much thought to the matter of interesting their youth in fire department activities," Chief Minter stated. "It is beneficial for the boys themselves and means selection of better material for the departments of the future. We are introducing the plan here. It is proving popular with the boys and we expect to enroll a large number in our junior organization.

"Only those of excellent character and law-abiding habits are desired. The members of the Long Beach Junior Fire Department will be only boys whom we would not hesitate to introduce to our mothers and sisters. The juniors will have their own officers and will vote upon the qualifications of all applicants. Each member will be equipped with an official badge and a whistle.

"Training in first aid, traffic regulation and the general duties of a fireman will be provided for the juniors. When the boys hear a fire siren, those in the vicinity of the blaze will go at once to the scene of the fire, assist in keeping the streets clear and stand ready to render any assistance needed. In a general way they will assist the department in fire prevention. Boys interested in becoming junior firemen should report in person on meeting nights."

Each member of the junior organization is pledged to break no laws and to use the authority granted them only in the proper discharge of their duties as junior firemen.

Farm Fires Total $150,000 a Year

Excluding the possible waste of foodstuffs or of labor, about $150,000 worth of property is destroyed each year by farm fires.

Among the more important causes for farm fires are spontaneous ignition of hay, grain, feeds and other agricultural products, lightning, defective chimneys and heating outfits; sparks on combustible roofs; carelessness in handling matches or in smoking, careless use of gasoline and kerosine, and faulty electric wiring. This spontaneous heating of hay and other products will be one of the first problems considered by the Bureau of Chemistry and Soils of the United States Department of Agriculture which is making a study of ways and means of preventing this huge loss. Cooperating with the department, are specialists of various prominent insurance and fire-protection organizations.

Salvage Covers Save Possible Losses

Many testimonials have been received endorsing the "Shuredry" waterproofed salvage covers manufactured by the Fulton Bag and Cotton Mills in plants at Atlanta, Ga., Brooklyn, N. Y., Dallas, Tex., Minneapolis, Minn., New Orleans, La., and Kansas City. The main office of the company is in Atlanta.

These covers have been used in one Southern fire department for twenty years, and in all that time have been found satisfactory. They have saved possible water and smoke damages, which may have been several thousands of dollars.

The covers are waterproof, durable, light and easy to handle. The manufacturers are willing to supply samples and prices on the "Shuredry" covers.

Purchase of Geneva, O., Apparatus Delayed—Action on the purchase of fire apparatus for Geneva, Ohio, has been postponed.

Chardon, O., to Buy Apparatus—Funds are being raised for the purchase of fire apparatus in Chardon, Ohio.

Mt. Kisco, N. Y., to Have New Station—A new fire station, estimated to cost $110,000, will be erected in Mt. Kisco, N. Y.

New Company Formed in Clermont, N. Y.—A new fire company has been formed in Clermont, N. Y. A fire house for the new unit is now under construction.

Ft. Dearborn to Be Station Model—Commissioner Goodrich of Chicago has suggested that the new fire house to be erected on the site of the old Fort Dearborn, be modeled after the design of the famous fort. The old stockade was famous when the loop section of Chicago was unknown. He plans to have the new station erected before the World's Fair in 1933.

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City of Cedar Rapids
Iowa
Commission Form of Government

Fire Department March 13, 1928.

Mr. Arthur Blanchard
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Cambridge, Mass.

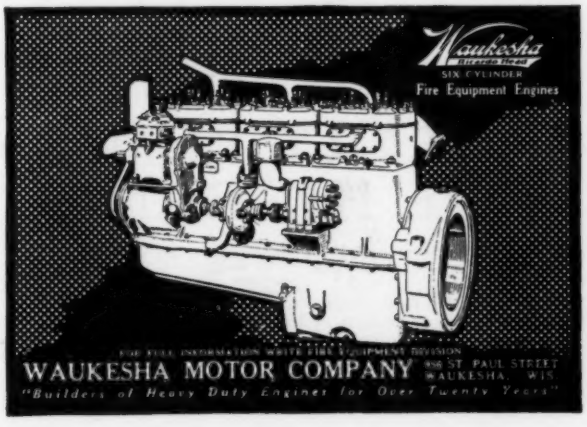
Dear Sir:

There are many advantages to be gained in using your angle nozzle tips in fire department work. In basement fires where there are cellar windows one can place the Angle Nozzle through a window and reach any corner of the basement or any part of the ceiling, even between the joists or partitions. These nozzles are just the thing for us in window work.

In working from a ladder one can direct a stream from most any angle. By means of a ladderhook one can arrange a stationary stream on the fire. For roof fires they lead any other nozzle I have ever used. I cannot recommend them too highly.

Your nozzle, evidently, is the result of a very inventive mind.

Yours truly,
Paul F. Dolan
Chief of Fire Department



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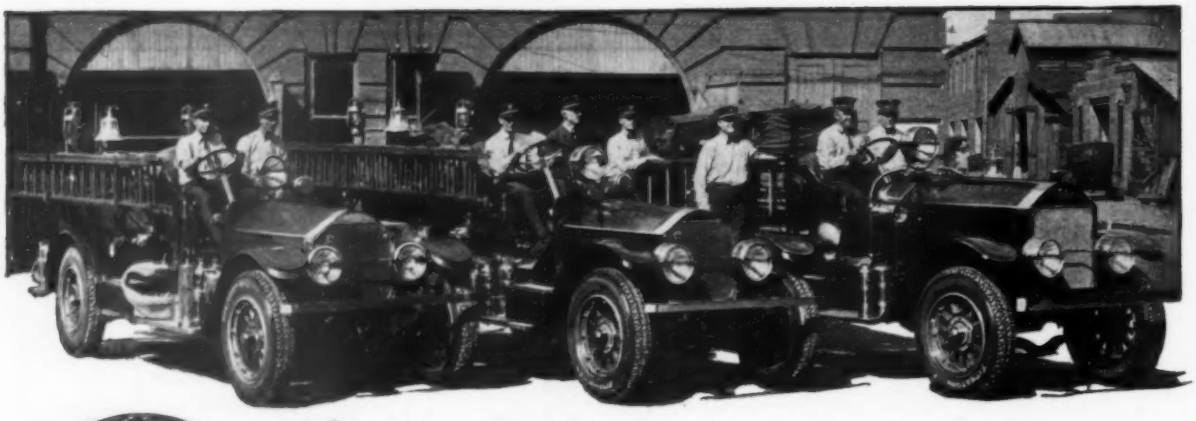

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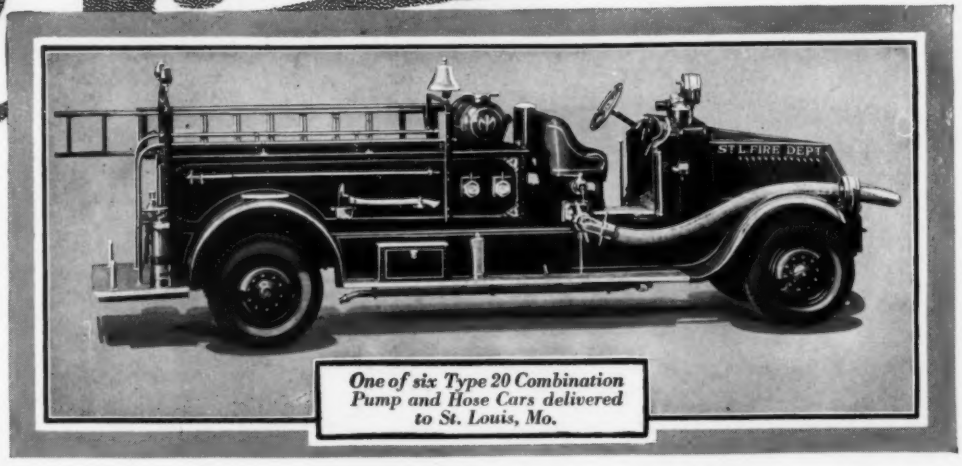

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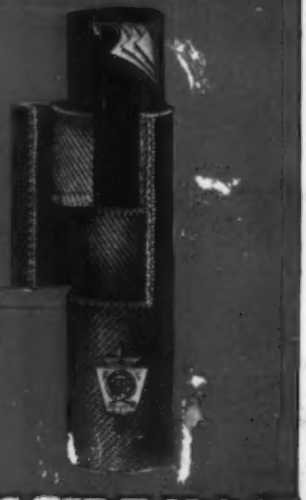

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